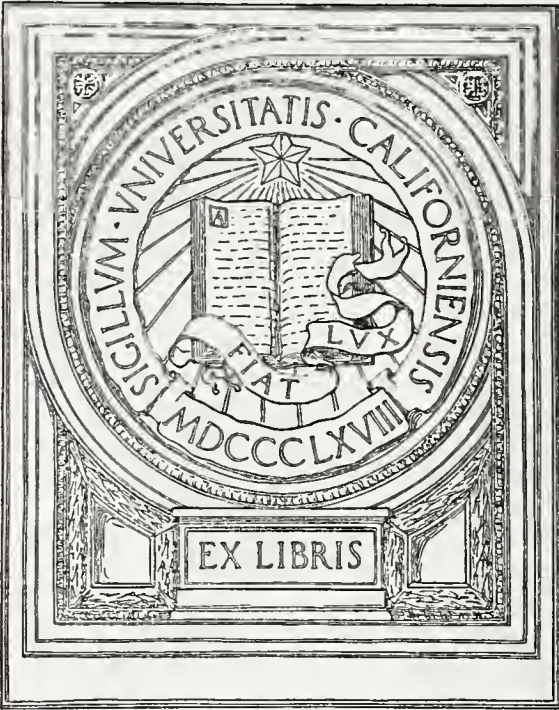




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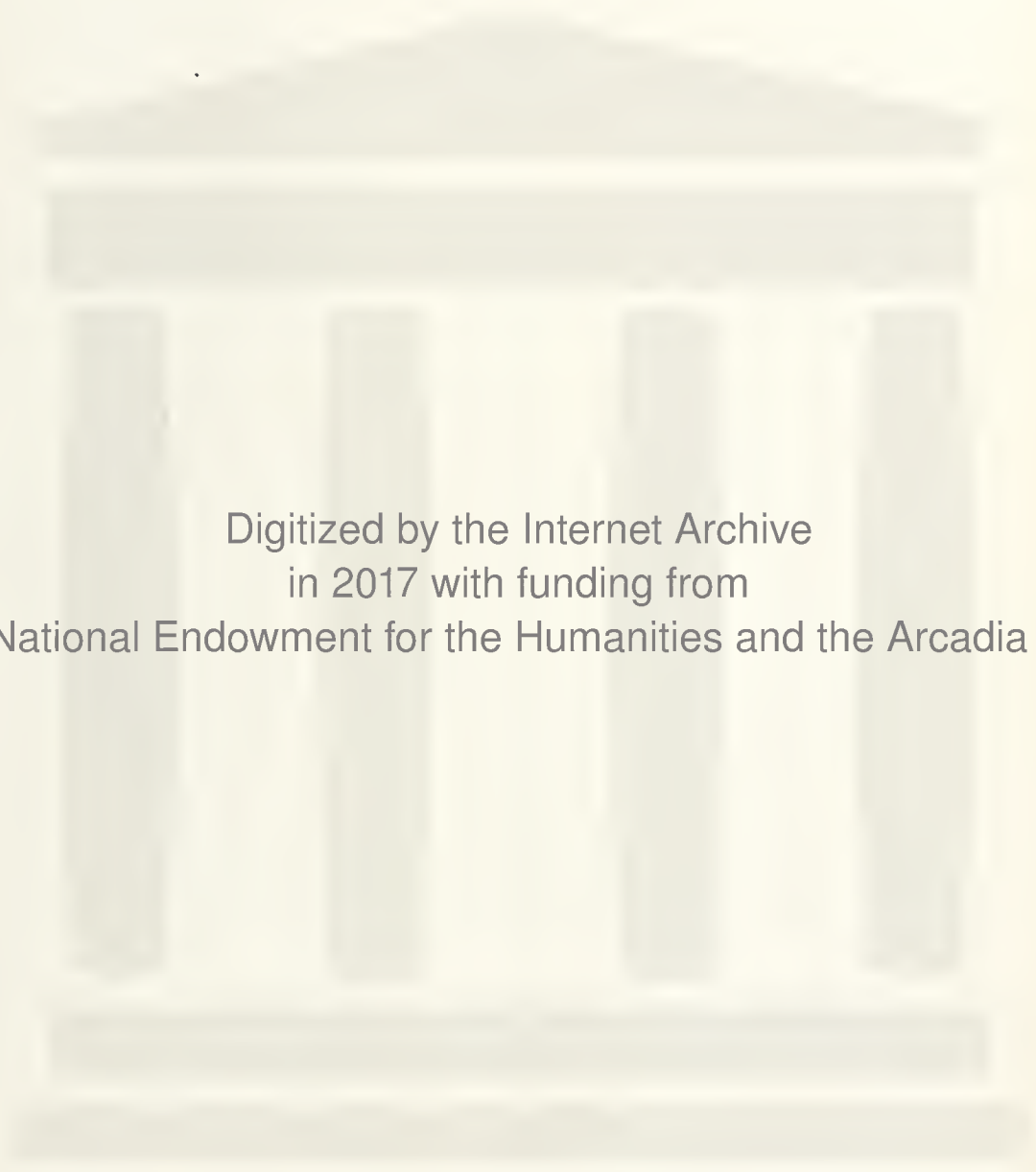


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## IN MEMORIAM\*

A. J. MOONEY, M.D.  
Statesboro

"As I stand by the cross on the lone mountain's crest  
Looking toward the ultimate sea,  
In the gloom of the mountain a ship lies at rest,  
And one sails away from the lea.  
One spreads its white sails on a far-reaching track,  
With pennant and sheet flowing free,  
One hides in the shadows with sails laid aback,  
The ship that is waiting for me.  
But, lo, in the distance the clouds break away;  
The gate's flowing portals I see;  
And I hear from the outgoing ship in the bay  
The song of the sailors in glee.  
So I think of the luminous footsteps  
That bore them o'er dark Galilee  
And I wait for the signal to go to the shore  
To the ship that is waiting for me."

Another year has passed and again in solemn assembly we pay tribute to those of our colleagues who have ceased their labors in our midst and passed into eternal rest.

At this time of the meeting when the attendance is at its height, when acquaintances are being renewed; when old friends are meeting after a year's separation; when the warm handclasps and the great spirit of fraternalism prevails when we look in vain for the familiar faces nor hear the voices that we heard a short year ago, it is fitting that we pause in solemn contemplation of their passing, mingle our sorrow with their loved ones' and pay our loving tribute to their work while amongst us.

Death has exacted a heavy toll during the past year and the list of the illustrious dead is the longest in many years. Listen to the roll call:

Anthony, Edwin R., Sr., Griffin, October 19, 1932, aged 80.

Aycock, Mell, Atlanta, February 25, 1933, aged 40.

\*Memorial address before the Medical Association of Georgia, Macon, May 11, 1933.

Block, E. Bates, Atlanta, October 25, 1932, aged 58.

Burford, Robt. E. L., Brunswick, December 1, 1932, aged 71.

Burtz, Charles W., Acworth, September 18, 1932, aged 61.

Caldwell, Allen Fort, Atlanta, November 10, 1932, aged 41.

Cate, Gustavus V., Brunswick, October 2, 1932, aged 70.

Chappell, Roy James, Dudley, November 22, 1932, aged 66.

Christiphine, Samuel A. V., Attapulgus, February 22, 1933, aged 65.

Cook, James Murray, Sardis, January 2, 1933, aged 46.

Daniel, Benjamin E., Claxton, August 23, 1932, aged 46.

Earnest, John Guilford, Atlanta, October 8, 1932, aged 90.

Edenfield, William N., Vienna, April 17, 1933, aged 69.

Edwards, Wanzie W., Butler, April 27, 1932, aged 54.

Folks, William Morgan, Waycross, October 30, 1932, aged 43.

Gammage, James T., Pineview, March 9, 1933, aged 62.

Holland, Sterling Price, Blakely, May 29, 1932, aged 51.

Horne, George Turner, Augusta, March 6, 1933, aged 72.

Hull, Asbury, Augusta, November 4, 1932, aged 49.

Ingram, H. R., Coleman, April 29, 1933, aged 71.

Johnson, Andrew J., Garfield, February 20, 1933, aged 60.

Kershaw, Theodore Gourdin, Augusta, January 27, 1933, aged 49.

Latimer, James H., Waycross, July 13, 1932, aged 62.

Malone, William Harvey, Tallapoosa, September 11, 1932, aged 54.

Matthews, Millard F., Athens, June 25, 1932, aged 63.

McAfee, John Colbert, Macon, March 27, 1933, aged 59.

Mobley, John William, Milledgeville, August 15, 1932, aged 62.

Niles, George McCallum, Atlanta, June 5, 1932, aged 67.

Noble, George H., Atlanta, October 29, 1932, aged 72.

Pace, William Tatum, Smyrna, July 26, 1932, aged 70.

Pate, Redding Hamilton, Unadilla, November 25, 1932, aged 60.

Patterson, James W., Dawson, December 27, 1932, aged 69.

Peacock, Elijah S., Harrison, April 15, 1933, aged 72.

Pennington, James Edward, Esom Hill, February 12, 1933, aged 74.

Poer, John M., West Point, November 15, 1932, aged 59.

Quillian, Wiley H., Lula, September 9, 1932, aged 55.

Respass, Herbert, Macon, August 6, 1932, aged 52.

Ricketson, Francis B., Warrenton, March 26, 1933, aged 73.

Riley, James Havis, Perry, August 22, 1932, aged 62.

Rogers, Daniel Jefferson, Glennville, September 21, 1932, aged 71.

Rogers, Robert Lee, Fairmount, December 18, 1932, aged 62.

Taliaferro, Valentine H., Eatonton, February 25, 1933, aged 65.

Tarver, Hugh R., Guyton, August 25, 1932, aged 63.

Tucker, Charles L., Griffin, June 29, 1932, aged 61.

Upchurch, Wilborn Arthur, Atlanta, March 27, 1933, aged 50.

Vaughn, Charles J., Atlanta, July 21, 1932, aged 75.

Wicker, Robert H., Rome, April 11, 1932, aged 74.

Winship, Herring, Macon, December 30, 1932, aged 57.

Williams, Beauregard, Pelham, October 26, 1932, aged 71.

Williams, Franklin Edward, Vienna, April 25, 1932, aged 51.

A total of fifty-four members of our profession answered the last summons.

While we bow in obedience to the will of the "One who doeth all things well" and do not ask to understand, but so deeply feel the loss of those who were taken at the time of the height of their usefulness, still we are thankful for the great number of the medical philosophers and patriarchs who were spared to us for so many years—those in the seventies, eighties, yea, even nineties. Their aggregate ages totaled the enormous sum of 3401 years, an expanse of time reaching back to the days of the Pharoahs of Egypt—before

the birth of the Great Redeemer. The average age of these fifty-four men was sixty-three years.

So many of them stand out in our memories for their many lovable characteristics that it would give me pleasure to individualize, but time would not permit. But I must mention the name of the lovable Dr. Edwin R. Anthony, Sr., whose name adorns the certificate of the State Board of Medical Examiners held by so many of us. Every community in which these men lived and worked will continue to feel the great uplift of their beneficent influence. By their lives they have glorified the title "Doctor"—that title that carries as much honor and dignity as kings and potentates enjoy—that title that is so expressive of confidence and consolation when spoken by one in the throes of physical affliction or mental woes. They were made strong by resistance; they were made patient by disappointments; their shadows and sorrows of life were brightened and sweetened by the sunshine and joys consequent upon a life well lived. I like to think of the ones as fortunate who had the privilege of travelling the road of life in company with those medical philosophers of seventy years, eighty years and ninety years, of learning from them the sterling qualities and frailties of man—of acquiring from them the philosophy of life that made them broad and strengthened the desire to "grow old with me; the best is yet to be."

When I consider the passing of time I think of the oldest living thing on earth, the giant sequoia tree that stands in the mountains of California. Seen in the evening, it stands in its majesty as a great cathedral. Its lengthening shadows from the setting sun seem to fall as a benediction to the day that is all but passed. Its age cannot be counted in years nor in centuries. It was a tree when the pyramids of Egypt were built by slaves to become the tombs of forgotten rulers. It was a tree when the armed forces of Rome stormed at the gates of Jerusalem and the Great Redeemer had died on the cross that man might have eternal life. Compared to its age, the glory and decay of kingdoms and dynasties were but as a watch in the night. It was old when a bold adven-

turer faced the dangers of an unknown, uncharted ocean to discover this new world of ours. For ordinary trees a century or less brings disintegration and decay. The life sustaining sap itself at last becomes a conveyor of disease and they rot, die and fall before the passing winds and storms. But still the giant sequoia lives on in all its grandeur. Why? Because in place of such sap as flows in common trees this giant contains within itself an essence that is its own preservative.

As it is with the sequoia, so it is with the heritage that has been left by our departed colleagues. We bid them farewell, confident of a peaceful rest for them until the great awakening. Their spirits have returned to the God who gave them; their mortal remains have again become a part of the great common earth. But the influence of their lives so well spent and the lasting imprint of their high ideals is to the living a magnificent heritage that will live on and on.

#### TREATMENT OF DISEASE OF UPPER PART OF DIGESTIVE TRACT: PREOPERATIVE AND POSTOPERATIVE

James F. Weir and Waltman Walters, Rochester, Minn. (*Journal A. M. A.*, Jan. 13, 1934), point out that preoperative and postoperative treatment is definitely indicated in the complicated diseases of the upper part of the digestive tract and has markedly lowered the operative mortality and the postoperative morbidity. In the gastroduodenal cases such treatment is important, especially in cases of anemia and obstruction. Obstruction is the most common complication in such cases and requires attention to the stomach locally and to the systemic effects of starvation, dehydration and toxemia. Intravenous saline and dextrose solutions constitute the chief therapeutic weapons. Immediately after operation continued careful observation is necessary in cases of obstruction, with the resumption of intravenous medication if any untoward symptoms occur. In an occasional case in which gastro-enterostomy otherwise is successful, symptoms of retention develop in from seven to fourteen days after operation, and usually the response to adequate treatment is satisfactory. Subsequent care of the patient with ulcer should be judicious and not engender psychoneurotic tendencies. In cases of jaundice, accurate and complete diagnosis, evaluation of the presence or possibility of hepatic or renal insufficiency or the tendency to hemorrhage, institution of measures for their control and a selection of the most opportune time for operation are the chief preoperative indications. A high intake of carbohydrates and fluids and the administration of calcium salts, solutions of dextrose and transfusions constitute important therapeutic procedure.

#### CHRONIC RECURRENT MIGRATORY ULCERATIVE COLITIS OF THE (BARGEN) DIPLOSTREPTOCOCCUS INFECTION TYPE\*

HARTWELL JOINER, M.D.  
Gainesville

There has been drawn to our attention, by Dr. J. A. Bargaen of the Mayo Clinic, the diseased condition of the above title. In 1923 he made the first report of his findings. Since that time he has made many contributions to the literature well worth our study. There have occurred several other reports of a similar nature. The progress of his work is most interesting. The disease may be defined as a chronic, diffuse local or general infection of the colon, with tendency to acute exacerbations and recurrences.

##### *Etiology*

The gram-negative diplostreptococcus, as described by Bargaen, is at present generally conceded to be the cause of the condition. The diplostreptococci individually simulate the pneumococcus, but are larger, and are in chains. Although this is the ascribed cause, I am not so sure but that this coccus is but a parasitic involvement, as is the Boas-Oppler bacillus in cancer of the stomach. The disease is more prevalent between the ages of twenty and forty. It has been found more frequently in females than in males.

##### *Pathology*

The infection usually begins in the rectum. Here is found the most marked reaction. The anatomical involvements in the order of their frequency are rectum, rectosigmoid, descending colon, cecum, ascending colon, and transverse colon. Any one or all of these divisions may be involved. There are recognized four definite stages of involvement of the mucosa of the rectum and sigmoid by sigmoidoscopic examination in the acute exacerbations. These are: (1) hyperemia, general or diffused, varying sized patches; (2) edema; (3) yellowish, miliary, abscesses; and (4) miliary ulcers. This picture is not difficult of recognition, nor is it usually confused with that of any other condi-

\*Read before the Medical Association of Georgia, Macon, May 11, 1933.



tion of these structures. In the stages of remissions of healing may be seen the rather typical glazed, contracted, scarred and pitted mucosa. Pathognomonic protoscopic and sigmoidoscopic signs are granular ulceration, pitted scars, and contraction of the lumen of the bowel. The roentgenogram and fluoroscopic examinations reveal various stages of dehastration to complete absence. This gives a peculiar rubber hose outline to the large bowels. This picture is most evident in the transverse and descending colon.

### *Complications*

These rather typical pictures may be and are altered by complications, which are several and serious. The serious complications, as suggested by other observers, that may be superimposed upon chronic ulcerative colitis are rather grave within themselves. These are malignant neoplasms. Polyposis is quite frequent. Twenty-six of 200 cases in one clinic or one case in every eight had polyposis. Perforation of the colon and local or generalized peritonitis constitute one of the most serious and emergency complications. Those with a greater experience state that rectal stricture, perirectal abscess and fistulae associated with this type of colitis are most difficult to control. Hemorrhage, mesenteric thrombosis, endocarditis, splenomegaly, severe anemia, and even tetany have been serious complications. Of course chronic ulcerative colitis may be superimposed upon some of the other many diseases of the colon. Also it may be associated with other organic or constitutional diseases. I shall report one such case that is of great interest.

### *Symptoms and Signs*

The clinical symptoms and signs of chronic ulcerative colitis are not altogether typical but are quite suggestive. There is a history of frequent, repeated, irregular, intestinal "unrest." It may be expected at any age, the youngest patient I've seen reported being a boy three and one-half years old. The complaints are of repeated and irregular attacks of frequent, bloody, purulent, mucoid stools, mixed with or covering various types of feces. The consistency of the feces varies considerably in different individuals, depending upon the section and extent

of the colon involved. In the intervals between these exacerbations the feces present many and various characteristics. They may become about normal, or may appear to be of a fermentative, or of a constipated character. Microscopically however, they present three features almost constantly, viz; blood, pus, and mucus. This to me now arouses great suspicion in the cases of diarrhea difficult of control. When the rectum and sigmoid only are involved, which usually is early in the disease, the stools may be scybulous, surrounded by or mixed with blood. With this there usually will be frequent passages or shreds of bloody pus and mucous. There is the desire to strain at defecation, with occasional griping pain and tenesmus. When the colon is involved in its entirety the stools are frequent, liquid, mushy, of a peculiar and individual odor, and mixed with much blood, pus, and mucous. Gas formation and accumulation is not uncommon, and when present it is most distressing to an already sensitive colon. The distress from gas often is associated with griping, grueling pains, which may be experienced along the entire course of the colon. It is the only disease I know of in which the colon can be outlined without the x-ray, and this is done by subjective symptoms and signs. The patient knows the location of the colon. A great accumulation of gas is not necessary to produce much distress. The patients become very timid about eating anything for days. At the moment no food is desired, nor is it relished even in the simplest forms and smallest amounts—a true repulsion to eating. When forced feeding is applied the intake of food frequently is followed very quickly by great gastric distress and vomiting. A quite common finding is a rather peculiar ashen pallor with varying degrees of secondary anemia. These patients lose weight rapidly. They cannot be far removed from a toilet. Naturally this becomes a constant dread. To me the most difficult feature of the disease is the mental attitude of the patient. Quite often they assume an anxious, worried, hopeless and forlorn facies, become extremely sensitive, and develop an annoying irritability. Some develop a peculiar complex. They do not wish to be "bothered", yet they are afraid to be left alone. In the acute exacerba-



tions the temperature and pulse may run a septic course. The temperature varies from 99 to 103.5 degrees; the pulse varies from 100 to 140 a minute. With these constitutional reactions so marked complete exhaustion is evident. The disease pursues a long drawn-out course.

I do not believe that the prognosis in patients affected by chronic ulcerative colitis can be given accurately. The course of the disease is of several weeks' duration always. The outcome, after complications have developed, is doubtful.

### *Diagnosis*

The diagnosis depends upon being led by the history to do proctoscopic and sigmoidoscopic examinations, and upon finding the condition in the large bowel as described. One should make microscopic and cultural studies from the miliary ulcers, miliary abscesses, or from the localized areas of edema and scars. The pathognomonic bacteria are the gram-negative diplostreptococci as described by Bargen. This coccus possesses definite morphologic, cultural, and biologic properties peculiar to itself. As an aid to determine what portion or portions of the large bowel are involved the use of the barium enema with fluoroscopic and roentgenoscopic examinations is of much value.

### *Treatment*

Rest in bed for the acute exacerbation, and abandon the bed as soon as possible. Isolation from visitors and the suggestion of a quiet, peaceful, cheerful view if possible. A quiet, gentle, patient, cheerful nurse is most essential. Keep the patient near a toilet, for they often will not wait for the bed-pan. Fresh air and sunshine are beneficial. Create early some mental diversion for the patient, and apply encouragement at all times. Early removal of all foci of infection is essential. Ice caps to the forehead, and cold sponges for temperature elevation are advisable. Maintain good sanitation. Give bismuth, opiates, and kaolin to control frequent bowel motions. Electric pads, hot stupes, poultices to the abdomen and opiates by mouth may be necessary to alleviate cramps, tenesmus, and abdominal distress. I cannot speak of irrigations and local applications as I have never used them. I believe all will agree that diet

is the second most important feature of treatment. Arsenic, phosphorus, iron, and other hematinics are valuable in treating the anemia. Transfusions have been used in severe anemias. Iodine orally gives a constant relief by way of intestinal asepis.

The treatment of complications I can only mention from literature studies as I have had none. Ileostomy, ileosigmoidostomy, cecostomy probably have their places. Removal of polyposes is desirable. Abscesses, fissures, and fistulae require great ingenuity and skill to combat successfully. Perforation and peritonitis require prompt attention as in any such emergency.

The patient should be encouraged to eat. The dietary should consist of simple food, easily digested and assimilated, of high caloric and vitamin value, and very little residue. I make special mention of cream, well ripened bananas, candies, desserts, eggs, tomatoes, carrots, and potatoes because of their great value.

The one invaluable source of treatment is by vaccine therapy. This is preferably an autogenous vaccine, but the vaccine as suggested by Bargen is very valuable to those who do not have a laboratory for making the autogenous preparation. The dosage of vaccine should be sufficient to produce slight local and mild constitutional reactions. It should be given by hypodermic injection every second to third day. The vaccine is far more effective than the serum, and does not produce the reaction similar to that of serum sickness.

### *Report of Cases*

*Case 1.—History.*—A white, male student, aged 17, complained of recurring diarrhea and loss of weight for the past ten weeks. The acute diarrhea had lasted two weeks. He had had another severe attack of diarrhea one month later. Since then he had suffered abdominal distension and had passed frequent yellow, fermented stools mixed with mucus and blood. He had a sense of gas pressure in the right lower abdomen which caused much distress. The sight of food was repulsive and he had no energy nor ambition. He had been using a high caloric diet and was worried about a crop of furuncles upon his face.

*Examination.*—The patient was well developed but thin, and his skin and mucous membranes were pale. He was intelligent and co-operative, but exhibited a facies of deep concern and grave suspicion. His temperature was 98 degrees, pulse 95 and respiration 21. He weighed 109 pounds and was 5 feet, 7 inches tall.

His abdomen was regular but scaphoid, and there was a slight muscular resistance to palpation. There was tenderness over the lower abdomen and true rigidity of the right rectus and the right oblique muscles. There was tympany over the cecum and by auscultation there was excessive peristalsis. The anal orifice was tender and the sphincter ani was taut. By anoscope there was a mild degree of edema of the crypts and mucosal folds. The feces were fermented, finely macerated and yellowish-brown, containing a considerable amount of undigested food. Blood and mucus were mixed with the feces. The microscopic examination revealed much pus and many bacteria. The clinical diagnosis was fermentative diarrhea.

*Treatment and Course.*—After several weeks on a strict routine of fresh air, a simple diet of high caloric value, and various drugs to combat the symptoms and change the intestinal flora, he showed very little improvement in his general condition. He had improved in regard to diarrhea, gas pressure and griping, but still had blood and pus in the stools. One afternoon after a visit to the office he had another attack of diarrhea, vomiting and fever with an increase in the amount of blood and pus in the stools. He became disappointed and irritable. At times he seemed to respond to bismuth, opiates, kaolin and a liquid diet, but was never relieved for more than two days. He was then put through a more detailed study. Proctoscopic examination revealed an inflamed mucosa containing a few small bleeding points. A warm smear and a culture from the mucosa were made. The smear showed many bacteria, among which was a large, gram-negative diplostreptococcus. This organism was cultured and a vaccine made. The patient was put to bed and given a diet of well-ripened bananas, candies, cream and hard-boiled eggs, iodine and given mental encouragement.

The autogenous vaccine was given by hypodermic injection every three days and caused a constitutional reaction of thirty-hours' duration after each injection for several weeks. The patient began to improve and gained thirty pounds in the next three months. A roentgenologic study of a barium enema after the vaccine treatment showed very shallow haustrations in the transverse and descending colon. He has had no return of the diarrhea and is apparently well. All symptoms and signs have disappeared and he is now an honor student in college.

*Case 2.—History.*—A white, female telephone operator, aged 20, complained of dysentery, loss of weight and fast pulse for one year. For the past five years she had suffered an occasional attack of diarrhea, but paid no attention to it until one year ago when her bowels began to move several times a day. She lost her appetite and became easily exhausted with rapid heart action. During the year she lost 18 pounds of weight. For the last four months she had been very nervous, had blood in her stools and vomited

every time she suffered diarrhea. She felt feverish and noticed griping pains in the abdomen.

*Examination.*—She was a well developed girl, but was emaciated and the skin over her face, neck, and upper chest was a fiery red. She cried easily and had a rotary tremor of the fingers, accompanied by muscular twitchings in the forearms. The mucous membranes were pale and the thyroid gland was somewhat full, soft and symmetrical. The temperature was 98.1 degrees, the pulse 126 and the respirations 23 a minute. The pulse was extremely quick and bounding and the second aortic heart sound was accentuated. The heart was otherwise normal and the blood pressure was 148/66.

The abdomen was scaphoid and symmetrical, but tender to deep pressure over the left iliac fossa and along the splenic flexure. The sigmoidoscopic examination showed many tiny, yellowish abscesses lining the rectal mucosa. These were interspersed among tiny, easily bleeding ulcers and peculiar, grayish pittings and scars. A roentgenologic study of a barium enema revealed a great narrowing of the lumen in the sigmoid area. There was a complete loss of haustration in the descending and transverse colon near the hepatic flexure. A smear and culture from the miliary abscesses and ulcers showed a large, gram-negative diplostreptococcus. A vaccine was made. The basal metabolic rate was plus 21, the hemoglobin was 72 per cent and the erythrocyte count was 3,160,000. The clinical diagnosis was hyperthyroidism and chronic ulcerative colitis of the Bargen type.

*Treatment and Course.*—She was taken from work and allowed to have lots of sunshine and fresh air and a high caloric diet of low residue. She was given the autogenous vaccine every three days. She also received large doses of iodine, kaolin and bismuth. It is coincident that iodine should be of value in the two distinct and separate diseases which she had. She responded well and gained weight and strength rapidly and to my surprise her thyrotoxic condition was reduced to normal with a basal metabolic reading of plus 12. She has remained well.

#### *Discussion on Paper by Dr. Hartwell Joiner*

DR. ROY R. KRACKE, Emory University: I have been interested in the subject of chronic ulcerative colitis for the past two or three years. My interest dated chiefly from the time that Bargen at the Mayo Clinic made his original report as to the etiologic organism of the disease. Since that time, many reports have been published relative to that particular organism. I think that the present status of the etiology of chronic ulcerative colitis may be summed up in stating that it has not yet been absolutely proved. There is much evidence to indicate, however, that this organism plays an important role in its causation.

From a bacteriologic standpoint, it is sometimes a very trying task to isolate this organism from the stools of these patients. It requires a very special technic that has been elaborated at the Mayo Clinic.



Oftentimes one may have a typical clinical case of ulcerative colitis, and yet, after repeated examinations, fail to obtain the organism. I have just had such an experience with one of Dr. George Eubanks' patients.

I should like to emphasize the necessity for a careful examination of stools. Sometimes it is only by a stool examination, and certainly by careful bacteriologic examination, coupled with proctoscopic examination, that ulcerative colitis can be differentiated from amebic dysentery.

In addition to the general therapeutic measures mentioned by Dr. Joiner, including bed rest, a high caloric and low roughage diet, Dr. Bargen and his associates recommend the administration of autogenous vaccines in many chronic cases, and serum in acute cases. They report success with the use of this therapy. We must always bear in mind, however, in treating this disease, that it is a disease characterized by spontaneous remissions, and that we must be careful to evaluate the results of any therapy, because of this tendency. Therefore, in estimating the results of therapy, we should always exercise caution not to attribute clinical successes to a particular type of therapy, especially when dealing with a disease characterized by spontaneous remissions.

DR. STEWART ROBERTS, Atlanta: The importance of this contribution, it seems to me, is this: Dr. Joiner has presented a good description of a disease. If it be a new condition, that does occur in Georgia, it is certainly one that we know better than we did formerly, and for which we should be on the lookout. We have heard, even the oldest of us, in our student days, of chronic recurrent migratory colitis. Only when Bargen came along did he seem to localize the condition and describe the bacterial cause. I am glad Dr. Kracke said there is some difference of opinion as to whether this be a disease entity or not. Dr. Johns at Tulane holds that it is not. It would not harm any of us to get the book just published by Saunders, written by Rankin, Buie and Bargen, on diseases of the anus, rectum and colon, in which 100 pages are devoted to this Bargen's diplostreptococcus, and chronic ulcerative colitis, another name for it.

Summing up the great cause of chronic diarrhea in the south, it is probably an amebic dysentery. We also have a diarrhea of sprue, and pellagra, and so forth. The abdomen is painless, and doughy. There are exacerbations of diarrhea, coming and going. The majority of the stools are between midnight and twelve o'clock in the day, with blood, pus and mucus in the stools. In the patient that does not respond to other treatment, and with those symptoms, Bargen's ulcerative colitis should be thought of, and a bacteriologic study of the stool made.

DR. HARTWELL JOINER, Gainesville: I have nothing to say in closing, but wish to thank the gentlemen for their discussion.

## COLLAPSE TREATMENT IN TUBERCULOSIS AND OTHER PULMONARY CONDITIONS\*

H. E. CROW, M.D.  
M. F. HAYGOOD, M.D.  
K. N. JOSEPH, M.D.  
F. C. WHELCHER, M.D.

*Alto*

The early diagnosis of tuberculosis is highly desirable and campaigns have been waged for the purpose of urging possible victims to consult their physicians before the disease has reached moderately or far advanced stages. When it was seen that this line of attack would not entirely bring about desired results a campaign to inform physicians more nearly accurately in early diagnosis of the disease was attempted. While both of these methods are responsible for an enormous amount of good, it must be admitted that the results are falling short of those expected because the insidious nature of the disease makes it certain that as long as we have tuberculosis to treat, a great many of the cases will be moderately or far advanced. In a large percentage of these prolonged bed rest is insufficient to effect a cure. It is in these more or less advanced cases that collapse therapy is filling a long felt need.

Artificial pneumothorax is the most familiar and usually the most satisfactory means of collapse. The idea that collapse of a diseased lung might be beneficial is not recent since it occurred to James Carson in 1821 and he showed its feasibility by animal experimentation. Probably the greatest credit for the institution of collapse therapy as a procedure in the treatment of pulmonary tuberculosis should go to Forlanini who began its use in 1888. It was employed in only a small per cent of patients until a few years ago but the results have been so favorable as compared to those where rest treatment alone was used that now in most sanatoria over 50 per cent of the patients are receiving some form of collapse therapy. Formerly it was thought that nitrogen had advantages in artificial pneumothorax not pos-

\*Read before the Medical Association of Georgia, Macon, May 10, 1933.

sessed by other gases, but it has been shown that because of the ready diffusability of gases, air is as satisfactory as any and is now used exclusively.

The success of the treatment depends considerably upon the selection of suitable cases. While the most suitable patient is one with moderate involvement in one lung and little or no involvement in the other, it has been repeatedly proved that the indications for artificial pneumothorax should by no means be confined to such strict limitations, because a quite seriously diseased contralateral lung, frequently not only does not become worse but actually improves when the more diseased lung is collapsed. Just how little or how much disease is necessary to justify collapse cannot be stated, as this is a matter of judgment based on experience. Bilateral collapse is now being used fairly frequently with justifiable results. Cavitation, especially when unilateral is usually an urgent demand for artificial pneumothorax. While some cavities do close under rest treatment alone, it should be remembered that about 90 per cent of the uncollapsed cases presenting cavitation of more than moderate degree are dead of tuberculosis in 5 years, and that patients with only small areas of excavation are in great danger of hemoptysis, pneumonia, and rapid extension of disease. Recurrent or severe hemoptysis can frequently be controlled by artificial pneumothorax when all other means have failed to stop the bleeding. Also teen age adult type tuberculosis is particularly destructive and requires drastic treatment for a cure. Collapse therapy should be employed early in this type of case and is perfectly justifiable when the disease is in the minimal stage. Properly selected children with the adult type of tuberculosis do well under pneumothorax treatment.

It is well known that the negro race is unable to combat tuberculosis as well as the white race, and the opinion has been held by some that the negro does not respond well to collapse therapy. That opinion is not in harmony with our experience at Alto, for the response of the colored patients who have had collapse therapy within the past two or three years has been most encouraging and

the results are far better than when the rest treatment alone was employed. It is our opinion that collapse therapy should be resorted to early in adult tuberculosis in the colored race.

There are a very few contra-indications. Dyspnea, unless due to the toxins of the tubercle bacilli, is usually considered to be a contra-indication. Collapse therapy is not justified in obviously terminal cases, except rarely for the amelioration of very distressful symptoms not otherwise controllable. If the expectant treatment is evidently hopeless and the optimum time for collapse therapy has passed, it is proper to give the patient the advantage of collapse therapy before all hope is gone.

The benefits of collapse therapy are due largely to mechanical and serological effects. Relief from the function of respiration and the intensified rest of the diseased organ are most important. The area of diseased surface is greatly reduced in size, secretions can no longer accumulate, and cavity walls are brought into approximation. The disappearance of symptoms, most of which are due to toxemia, is brought about largely by lymph stasis, and the patient is no longer subjected to the very harmful effects of overdosage of his own tuberculin and to the toxins of necrotic tissue. It is also probable that the lesser amount of oxygen in the collapsed lung has a retarding effect upon the growth of the tubercle bacilli.

The dangers of the operation, if properly performed, are slight. Serious pleural shock is rarely encountered and infection of the pleural cavity with organisms other than the tubercle bacilli is due to faulty technique. Effusions occur in the majority of cases but usually do not in any way lessen the beneficial effects of the treatment. Usually the collapsed lung will re-expand when refills are stopped, and the treatment can be discontinued at will. Unquestionably there are some dangers and complications in artificial pneumothorax, but they are slight as compared with the risk run by the majority of pneumothorax patients if left to the ordinary expectant treatment. As a result of artificial pneumothorax, many patients who would otherwise be hopeless are restored to health,



and the lives of many others in whom the prognosis is so unfavorable that permanent cure cannot be hoped for, are prolonged and made more comfortable.

Mineral and vegetable oils are sometimes employed to maintain a collapse of the lung but their use is attended with more severe reactions and complications than when air is the medium. A 2 to 5 per cent solution of gomenol in pure paraffin oil is the one in most common use and is indicated when the pneumothorax is becoming obliterative and in some cases where a purulent effusion is present. Oil should not be used except in the presence of very definite indications.

Because of pleural adhesions artificial pneumothorax is at times either impossible or so incomplete that the desired results are not obtained. In many such cases paralysis of the diaphragm will prove of much benefit. Phrenicectomy is a comparatively simple and safe method of producing a moderate degree of compression of the lung. The amount of compression usually varies from one-sixth to one-third of the volume of the lung. This is sufficient in many cases to close cavities, reduce temperature, cough, and expectoration, and bring about a subsidence of other symptoms. These beneficial effects are brought about by the relaxation of the lung, the reduction in volume, and by the elimination of the pumping action of the diaphragm. Compression is exerted upon the apex as well as upon the base, so that disease located in the upper portion of the lung is benefited as much as in instances where it is located at the base. The indications for artificial pneumothorax and phrenicectomy are so similar, that probably every case in which artificial pneumothorax is advisable but impossible or unsatisfactory because of adhesions should have the nerve operation.

Pleural adhesions are frequently found when artificial pneumothorax is produced and occasionally they form during the course of the treatment. Fairly frequently they are causes of failure by reason of preventing a complete collapse of the lung. For this condition Jacobaeus devised the operation of closed intra-pleural pneumolysis. By means of two cannula and a thoracoscope

string-like adhesions are divided by electro coagulation. The dangers of hemoptysis and wounding the lung contra-indicates the employment of this method in broad band adhesions.

Extra-pleural pneumolysis is a collapse measure occasionally used by some. It is most often employed to collapse large stiff-walled cavities in the upper thorax. The operation consists of separating the lung or part of the lung and its pleura from the chest wall. Temporary tampons of gauze, and permanent "fillings" of fat, muscle and paraffin have been used to exert pressure on the cavity walls. Extra-pleural pneumolysis is a partial operation and usually a thoracoplasty is preferable.

Extra-pleural thoracoplasty is a collapse measure which has won a much deserved place in the treatment of pulmonary tuberculosis. It consists of the subperiosteal removal of portions of the ribs near the vertebrae. Sections of the ribs, shorter above and longer below, are removed from the first to the eleventh inclusive. The indications and contra-indications for this operation require too much space to be included here, but in general it should be considered when artificial pneumothorax is incapable of effecting the desired results. Thoracoplasty is a major surgical procedure. The age of the patient, the general condition, and the amount and character of the involvement in the better lung must fulfill much more strict requirements than in the case of phrenicectomy or artificial pneumothorax.

Scaleniectomy is another surgical method which has recently been advocated by some workers to lessen motion in the diseased lung and some good results have been reported. The operation consists of dividing the scaleni group of muscles as near their insertions as possible. The result is a partial immobilization of the lung. It is probably of most value when used in conjunction with phrenic exeresis and is indicated in some cases in which a radical rib operation is undesirable.

The various collapse measures have been giving such excellent results in the treatment of tuberculosis that some one or a combination of them is now being employed by

many of the larger sanatoria in the majority of patients with this disease. Nearly every fatal case of tuberculosis except the acute miliary type has at some time in its course presented the indications for some form of collapse therapy, and now the physician should not only strive for early diagnosis but must also become familiar enough with the indications for surgery that he will not permit his patient to pass that stage at which the opportunity for recovery by this means is possible. At present in a large number of patients seen in sanatoria for the first time the optimum moment for collapse therapy has already passed.

Of the white patients with adult type tuberculosis in the state sanatorium at present, fifty-seven per cent are receiving some form of collapse therapy. Thirty-eight per cent have artificial pneumothorax and nineteen per cent have had an operation on the phrenic nerve. Sixty-eight per cent of the colored patients have some collapse measure; fifty per cent have artificial pneumothorax and eighteen per cent have either a phrenicectomy or phrenicotomy.

The welfare of the individual patient has been the chief consideration, but it should be mentioned that collapse therapy as a public health measure is beginning to play an important part in the control of tuberculosis. A high percentage of positive sputum cases become negative on the proper application of these measures, and the effect of rendering these carriers incapable of transmitting such a highly communicable disease is apparent.

The success of collapse therapy in pulmonary tuberculosis has led to its rather extensive trial in other diseases of the lungs, particularly abscess, gangrene and bronchiectasis. Some excellent results and many failures have been experienced. The causative organisms in the majority of instances of the above named diseases are anerobes and because of this fact it is reasonable to suppose that such conditions will respond to collapse therapy in a much less satisfactory manner. If compression aids in emptying the cavity the result is often good but if drainage is interfered with the lung ruptures and a fatal empyema usually results. Thoracoplasty in the sacculated type of bronchiectasis has had

such a particularly high mortality that the operation is seldom justified. Phrenicectomy has caused fewer serious complications, but artificial pneumothorax and thoracoplasty should be used with greatest caution in abscess, gangrene and bronchiectasis.

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*Discussion on Paper of Dr. M. F. Haygood, et al*

DR. CARL C. AVEN, Atlanta: Mr. President and Gentlemen: This is a very interesting subject to me. I think it is one of the most interesting things we have to deal with, because of the tragic age in which this disease comes. In other words, the great majority of these people come in between fifteen or sixteen years of age and twenty-five, where we can use pneumothorax and do so much good.

I think Dr. Whelchel did not have time to stress the great economic value of pneumothorax and other means of collapse. We should stress that more and more, because of the long, drawn-out period necessary for the rest cure. It is necessary to shorten that, if possible, for the benefit of the patient from an economic standpoint. Artificial pneumothorax does cut that down very considerably.

Another interesting thing is the fact that the vital capacity of the lung is limited. You must remember that you do not always have to completely collapse these lungs, because of the wonderful selectivity of artificial pneumothorax. You inject air into the pleural cavity, and it will select the diseased portion of the lung and collapse that first. The fact that it will do that, makes it still more important.

It is not necessary to state to men who have had experience that artificial pneumothorax is fraught with some danger. The recent work done in Chicago University shows that air-emboli have been the most common accidents that might occur in the giving of artificial pneumothorax. They were able, by experimental study, to x-ray animals where air had been injected into the blood stream, and found that by elevating the feet above the level of the head these dogs had the air in the end of the feet instead of at the brain, and they avoided a great many of the accidents by lowering the head and raising the feet.

It matters not if pneumothorax cannot be complete, it quite frequently gives beautiful results, because the pressure will limit the expansion to that side, and in addition will keep compressed the normal part of the lung that has not become diseased.

Let me impress this upon you: These cases should have careful selection for this work. Although a very large per cent of them are amenable to this treatment, the internists, x-ray men and surgeons should have conference after conference, if you are going to resort to such a means as thoracoplasty and the more radical procedure. Remember you are dealing with a radical disease, and therefore the patients should be given every benefit of the doubt, and every care should be given, and every study should be made, both from the standpoint of the x-ray man, the internist



and the surgeon. Dr. Whelchel's work on the negroes is very interesting.

DR. J. A. REDFEARN, Albany: Dr. Whelchel has pointed out that these patients, after resting perhaps a period of two months without benefit, should have had artificial pneumothorax. Between fifty and seventy-five per cent of these patients are getting it already, and these percentages will probably increase. What does that mean? That means that in your communities you owe it to your people to learn the simple process of artificial pneumothorax, especially refills. To give a refill is just as simple as giving an intravenous injection. There isn't a man in this house who cannot learn to do it all right in less than a week.

In the first place, it is a public health problem, and if we do not do this for our charity patients, who are taken in by the state and kept on an average of six months, and we know it takes eighteen months to three years, and sometimes longer to get a cure, then this work is going to be undone and the patients will become chronics and continue to spread the seed of this disease.

With regard to our private patients who are carried to some institution, whenever possible they are better treated for a while in institutions, because they learn so much there that cannot be taught in the home. The majority of those private patients will have to pay 35 to 50 dollars a week, and they can ill afford it, because this disease occurs in the struggling period of life. So it is our duty to have over the state men who can give refills, thereby saving that patient's money.

We owe it to that patient as well as to the charity patient, and first of all we owe it as doctors to the citizens of our state.

DR. CHAMPNEYS H. HOLMES, Atlanta: A few days ago in a meeting at Atlanta, Dr. Haygood of Alto, read a paper in which he discussed mass examination of members in a community. This dealt with early diagnosis, spotting and finding of contact cases, and segregation of open cases. This afternoon you have heard a method which has revolutionized the treatment in cases with advanced disease; namely, collapse therapy. It occurred to me that with this comprehensive program of universal examination for early and contact cases, together with the application of collapse therapy where indicated, what a real knock-out blow the old white plague would receive on the jaw. If what we are doing in Atlanta were done in every center of any appreciable size, the second half of this program could certainly be carried out.

We have organized a pneumothorax clinic in connection with the Atlanta Tuberculosis Association, where we give the pneumothorax treatments. I am in charge of the clinic, which is held every Friday morning. I extended to the members of the Georgia Tuberculosis Association the other day, and I repeat it to you now, this invitation: If any of you are in Atlanta on a Friday morning at nine o'clock, I

will be very happy indeed to demonstrate to you what I know about the technique of artificial pneumothorax. At present we are doing around nine to ten cases every Friday morning. Dr. Haygood expressed the opinion that he would like those men who are interested to come to Alto to learn the procedure, at the state's expense. Collapse therapy is here to stay, and is the greatest thing in the treatment of this disease that has been developed within the past thirty years.

DR. A. J. MOONEY, Statesboro: I just want to say something that I fear Dr. Haygood and Dr. Whelchel are too modest to say about themselves and the work they have been doing at Alto. Only yesterday afternoon I was talking to a layman who had just returned from a trip to the State Tuberculosis Sanatorium at Alto. He had taken his son up there, and he spoke about the magnificent spirit that existed at Alto, the spirit of optimism among the patients, and the spirit of cooperation and good cheer that was found among the patients, nurses and doctors. He said that Dr. Haygood took him, a farmer, to show him the premises. He showed him 400 of as pretty cows as he had ever seen. He showed him a flock of chickens from which he gets fifty dozen eggs a day. He showed him some steers, furnishing 1200 to 1500 pounds of beef a week. He said there was the prettiest garden he has ever seen, right in the foothills of the mountains of North Georgia. He was carried away with it, and I think the medical profession and the state of Georgia should be proud of such an institution as that at Alto.

Dr. Haygood very courteously extended to me an invitation to come and stay two or three days on a visit.

DR. C. K. SHARP, Arlington: Two summers ago while on a visit at Saranac Lake, there occurred at Stony Wold Sanatorium, Lake Kushaqua, N. Y., a most trying case where the x-ray showed a large, symmetrically round cavity; after pneumothorax was given and another x-ray picture immediately this cavity was converted into a pyriform one, the apex of which represented the attachment of an adhesive band which extended to the lateral chest wall. Pneumolysis was done on this case with the result that there was a complete collapse on the next introduction of air.

Without some means to free these adhesions, these patients seem hopeless, but with the advent of this operation pneumolysis collapse can be secured. Great caution is observed in using the cautery at just the right cherry heat as this slowly divides the adhesion and thoroughly chars the stumps with little danger of hemorrhage and a secondary empyema.

DR. F. C. WHELCHER, Alto (Closing): Personally, I am much encouraged by the liberal discussions this subject has provoked, as well as interest manifested in the application of collapse measures, especially in the treatment of suitable cases of pulmonary tuberculosis. I feel definitely sure that many physi-

cians and surgeons will find that a sizeable number of their patients suffering from tuberculosis can, by these measures, be adequately treated in local hospitals and in some instances at home. I wish to thank the gentlemen for their discussions.

### FISTULA IN ANO\*

GEORGE F. EUBANKS, M.D.

*Atlanta*

Fistula is a Latin word meaning reed or pipe and in its strictest application to pathologic conditions about the rectum and anus should apply only to those cases in which the cavity of the rectum or the potential cavity of the anus is connected to the external surface of the body or another viscus by an abnormal opening. Common usage has brought this term to a wider application so that now it is used to designate practically all draining sinuses at or near the anus which have an opening either into the rectum or anus or on the external skin surface.

If the strict application of the term fistulae is to be used they need be classified only as simple and complex with the additional anatomical sub-heads under the latter class descriptive of the organs involved. These are such as recto-vaginal, recto-vesical, rectourethral, recto-rectal, etc. According to most of the classifications recently published the so-called blind internal and blind external sinuses are classified as fistulae and therefore they are probably properly included in any descriptive classification of fistulae. Nearly all fistulae with the exception of those few caused by blood or lymph-borne infection deposited in the tissues around the anal canal and the occasional malignant fistula are both traumatic and infectious in origin. Therefore an etiologic classification is both unnecessary and extremely difficult of accomplishment.

Fistulae constitute from fourteen to twenty per cent of all conditions presented by patients seeking relief from rectal abnormality. Sixty-two per cent occur in males and thirty-eight per cent in females. Seventy-five per cent occur between the ages of

twenty and fifty. Three-tenths per cent of all patients have a fistula.

The type of organism responsible for the development and persistence of a fistula varies. It was once held that all fistulae were the result of tuberculous infection elsewhere in the body but this supposition has been largely discounted through a careful check of figures presented by institutions treating large numbers of tuberculous patients. In these institutions approximately six per cent of the patients present fistula as a complication of their general disease. However not all of these fistulae are tuberculous. It is extremely difficult to demonstrate the presence of tubercle bacilli in many cases of fistulae which are clinically tuberculous in origin. On the contrary many surgeons report fistulae as tuberculous if the patient has a pulmonary or intestinal tuberculosis even though the organism or typical histological picture of tuberculosis is not demonstrable in the rectal lesion. The definite increase in the incidence of fistulae in tuberculous patients over the incidence in the non-tuberculous segment of the general population would indicate that tuberculosis plays an important predisposing part in the development of fistulae. It should be ruled out in all cases where there is not some definite evidence of other etiology. Staphylococcus, streptococcus, and colon bacillus are the organisms most frequently encountered in cultures from fistulae and these organisms are responsible both for the primary invasion of the perirectal tissues and the persistence of the sinus. Diabetes, syphilis, and other debilitating general diseases predispose to fistula formation as they do to other suppurative lesions.

All fistulae, irrespective of type, have as one stage in their development the formation of an abscess in the tissues in or about the anus or rectum. This is, however, never the primary stage in the development of the fistula and the abscess is always preceded by infection elsewhere, either adjacent or remote. By far the majority of fistulae have as their first stage some trauma to an anal crypt. This may be from a foreign body in the anal canal such as a vegetable seed or fiber, trauma from over distension of the canal by a large, hard stool, unskilled introduction of an enema

\*Read before the Medical Association of Georgia, Macon, May 11, 1933.



tip, etc. The trauma induces an inflammatory reaction in the crypt upon which are engrafted pyogenic organisms which are always present in the canal. Extension of the inflammatory process breaks the continuity of the mucous membrane lining the crypt and the organisms gain entrance into the submucous layer of the anal wall. From this point their exit and colonization in the loose areolar tissue of the perirectal and perianal spaces is easily accomplished. Here an abscess develops and causes the first symptoms of sufficient importance to suggest the presence of rectal disease to the patient. If the internal opening of the abscess in the crypt remains patent, the pus will drain into the anal canal without acute distress for the patient. The condition in this stage constitutes the blind internal sinus.

However, the usual course is for the inflammatory edema of the infectious process to close the internal opening and in this case the pus is under considerable tension and results in severe pain, fever, leucocytosis and the other signs of pus under tension. The upward burrowing of the pus is usually limited by the rather dense fascia covering the levator ani muscle and its easiest course is to the external body surface, usually close to the anus. When the abscess ruptures externally or is opened by the surgeon, the cavity of the abscess contracts as the pus is evacuated and the result is the pipe-like tract of a fistula and if the internal opening remains closed the resultant condition constitutes the blind external fistula. If there is no reopening of the original opening in the crypt and if a sufficiently large external opening is made, the abscess cavity may fill up completely with scar tissue and the entire process remain quiescent for some time, occasionally permanently. More often there will be pockets remaining in the abscess cavity which do not become entirely obliterated or the internal opening will reopen and the entire procedure will be repeated with perhaps an external opening in a different location.

When this has been repeated several times with a number of new external openings, the condition is called a "watering pot" fistula. Also the abscess may burrow in the

perianal tissues to another area of the anal canal and point into the anus itself, thereby giving rise to multiple internal openings. This latter condition has been rarely met with in my experience. The crypts usually involved in this process are those located in the posterior half of the anal canal and most often just lateral to the posterior commissure. In searching for an explanation for the frequent involvement of these crypts, it must be remembered that the inferior hemorrhoidal<sup>3</sup> artery which is a branch of the internal pudendal artery gives off fine terminal branches which penetrate into the submucous layer of the anal canal on either side of the median raphe in the posterior quadrant of the anus. Other crypts are traumatized as often as these but there is a natural tissue resistance to the invasion of organisms which prevents the spread of the infective process in the bowel wall, rarely permitting exit into the surrounding tissues. In the posterior lateral segments of the anal canal, however, there are definite perivascular spaces which give easy exit through the muscular layers into the perirectal and perianal spaces to any organisms which reach the submucous layer of the anal canal in these quadrants. Approximately seventy-five per cent of all fistulae have their internal opening in a crypt and follow the course described.

The prophylaxis of fistula in ano is dependent on the early recognition and proper care of perirectal and perianal infections. The cryptitis which usually precedes the infection outside the anus cannot be diagnosed by a digital examination and is only suggested when a careful history is taken. The patient may complain of a mild or even severe sense of discomfort in the anus and in the absence of a careful visual examination the symptoms will be attributed to a fissure or an anal ulcer, a sedative ointment or suppository prescribed, and the beginning process of a fistula be allowed to continue unhampered. If the examination is made and the deepened and inflamed crypt found it should be incised to promote drainage. This is a simple surgical procedure which can be easily carried out in the office with the use of a local anesthetic. It consists in the

vertical incision of the tiny valve which forms the anal wall of the crypt and this incision should be extensive enough to open the crypt throughout its entire depth so that any retained organisms or their products can drain into the lumen of the anal canal. The provision of this drainage prevents deeper burrowing of the infection as it does in abscesses elsewhere. Further prophylaxis in the prevention of fistula in ano consists of the immediate opening of any indurated, infected area around the anus.

Time should not be lost in waiting for the abscess to point at the skin surface but as soon as one can be reasonably certain that suppuration has occurred, and in the judgment of the surgeon, in many cases even before pus has actually formed, a wide incision into the abscess, real or potential, should be made. Continuance of drainage to the point of healing of the abscess should be attained by the extent, type, and location of the incision rather than by the introduction of cumbersome packs. If the opening is unroofed rather than simply incised, the abscess will continue to drain without packing. The wound should be dressed once a day or preferably oftener in order to prevent closure of the external opening. No attempts should be made to find an internal opening at this stage because if the opening has closed it may remain closed and any probing attempts at its discovery may lead to its re-opening or the puncture of the friable anal wall with the production of a second false opening, thus complicating the condition, making the secondary operation much more difficult, and materially jeopardizing the eventual recovery of the patient.

When the fistula is finally and completely developed, there is no relief to be obtained except through surgical intervention. Beck recommends the use of a bismuth paste as an injection but this is applicable in a rather small number of cases and in my hands has not been sufficiently successful to warrant its continuation. Where the external opening of the fistula is so situated that the sacrococcygeal area can be sterilized, a caudal, a parasacral or a combination of the two furnishes ideal anesthesia for the operation for

cure of a fistula. This type of anesthesia perhaps requires a slightly longer time for its administration but more than compensates for the extra time consumed in the ideal relaxation of all neighboring muscles and the better convalescence. If these anesthetics are not applicable, a general inhalation anesthesia or low spinal anesthesia must be used. Local infiltration is impracticable because of the infection around the external opening and the tortuosity of the channels.

Divulsion of the external sphincter is both unnecessary and unwise because the sphincter often has to be divided in the operation and this together with the added trauma of divulsion may result in incontinence which may become permanent. The tract of the fistula is best explored by the preliminary identification of the internal opening. This is advisable because the investigating probe will be much more likely to enter a possible blind tract leading off the main sinus if passed from within outward. Sacral anesthesia will produce sufficient relaxation of the sphincters without dilatation to bring the line of crypts well into the visible operative field and the probe can be passed into the depth of each crypt. A number two silver wire suture heated in the flame of a Bunsen burner until a bead forms on the end makes an ideal probe for this purpose as it is sufficiently flexible to eliminate the danger of penetrating the bottom of a normal crypt and will not make a false passage once it has entered a fistulous tract. It is usually extremely difficult to probe the entire tract from the internal opening and the internal probe should be passed as far as possible without difficulty and then a similar probe passed into each of the external openings until they are felt to be in contact with the first probe. This is usually easily determined as the contact of metal with metal is unmistakable.

When the tract or tracts are threaded with these probes, it is well to pass a grooved director along the wire probe in the external opening until it emerges from the internal opening. The silver wire probes can then be removed. If the grooved director passes through the external sphincter parallel to one of its radii a single incision may be made



along the director dividing all of the tissues from the skin surface down to the director. Usually in multiple external openings the tracts will be found to converge and unite before the sphincter is entirely penetrated so that only one incision in the sphincter will be necessary. If the tract through the sphincter is not parallel to its radius, an extra incision from the edge of the sphincter to a point where the muscle can be divided by such a line will be necessary. In no case must there be any departure from this rule if incontinence is to be avoided.

It is usually unnecessary to inject colored solutions into a fistulous tract because it is always lined by a dirty, gray, pyogenic membrane which is as characteristic of the tract as the most intense color. Hydrogen peroxide injected into the external opening of the tract will frequently aid in the identification of the internal opening. If it becomes necessary to inject any other substance in order to follow the ramifications of the tract, a warmed bismuth paste will be found very satisfactory as it can be easily wiped off after the tract is identified whereas the methylene blue solutions most often used impart a permanent stain to the tract and all surrounding tissues as well and often interfere with the identification of the sphincter muscles. After the tract is laid open throughout its course, the edges of the wound, however extensive, must be trimmed away so that a shallow, wide groove is formed rather than a deep sulcus. If this is not done, it is almost certain that in spite of careful postoperative management, bridging of the wound edges will occur and render the possibility of a recurrence of the fistula much more likely. Usually it is unnecessary to place any sutures in a fistula wound but sometimes the tract is long and it is possible to obtain primary union in the outer extremities of the wound by placing in a few sutures. This procedure will shorten convalescence some but is of questionable value because of the frequency with which these sutures break down in the presence of the pyogenic bacterial flora.

There are three factors which are indispensable in the surgical cure of a fistula in ano. First, accurate determination of the in-

ternal opening of the tract. Failure to find this opening probably accounts for more recurrences and unsuccessful operations than any other factor. Second, the tract must be laid open in its entirety, including all lateral ramifications. This is a frequent error. Third, careful postoperative management is as important as the other two factors in obtaining a successful result. It is essential that these wounds be made to heal slowly and properly. This means that there must be no bridging of the wound at any point and that the wound in the skin be the last to heal. It is difficult to maintain the skin wound because of the marked tendency of wounds in this area to heal even in the presence of infection and fecal soiling. The skin always tends to heal more rapidly than the mucous membrane wound and if this occurs the patient is certain to have a recurrence even though the wounds were apparently healed entirely.

Most of the failures that I have experienced have been due to my oversight in postoperative care or failure to sufficiently impress the patient with the extreme importance of this tiresome, apparently unnecessarily prolonged care. From the third postoperative day the wound should be probed at least once daily with a dry cotton applicator to cleanse the depth of the wound and to maintain the integrity of its drainage. Also the finger should be introduced into the anus each day after the third postoperative day to prevent bridging where the line of incision passes from skin to mucous membrane. An irrigation of the anal canal with an aqueous solution of witch hazel through a small tubular irrigator with multiple lateral perforations will do much to prevent the accumulation of drainage in the tract and in the other crypts.

Hot sitz baths for fifteen minutes once or twice a day will accomplish a great deal in promoting the comfort of the patient and cleanliness in the wound. The judicious use of mineral oil will keep the stools soft and promote evacuation. It is unnecessary to constipate these patients as the area of operation is soiled from the beginning and any attempts at maintenance of sterility are entirely fallacious. The natural tissue resist-

ance to infection from organisms to which the tissues have long been accustomed is the best assurance possible that these wounds will heal well with proper care. Incontinence is not to be feared if the muscle is properly divided once and the postoperative care is good. If avoidable it is best not to divide the sphincter in the anterior or posterior midline because it is at these points where the sphincter fibers separate to their respective sides of the coccyx posteriorly and the common tendon of the perineum anteriorly.

Occasionally one will encounter an external blind sinus where no internal opening can be demonstrated. Some authors recommend the production of an artificial internal opening in such a case. I am unable to appreciate the rationale of producing an extra, artificial, internal opening when another, pathologic internal opening already exists but is concealed or temporarily closed. The fistula will recur as readily through the original opening which started the process after the production of an artificial opening as though the new opening had not been made. If one is unable to find the internal opening after the most careful search, it is best to enlarge the external opening into a wide open wound, place a gauze pack down to the depth of the wound and allow it to fill up with scar tissue from the bottom, removing a small amount of the gauze every day. Then if the original internal opening reopens it can be frequently cared for by the introduction of an elastic seton with no further operative procedure. Care must be exercised in this type of case to keep the external opening large enough to prevent the collection of pus in the depth of the wound.

Any bridging in this sinus during its healing process will be certain to cause a recurrence and if this bridging does not occur healing will probably be complete and permanent. This is especially true if the bowel habits are corrected and there is no hard stool or straining to reopen the diseased crypt which started the infection. I have two patients under observation for whom I did such an operation three years ago. Both patients had long histories of drainage from an opening in the skin close to the anus with

periodic closure of the external opening, painful swelling, followed in a few days by a return of the drainage with relief of the pain. Both patients had to undergo prolonged periods of office dressings after their operation but fortunately I was able to enlist their intelligent cooperation and they are now both clinically well. An interesting feature concerning one patient was that she had noticed an intense lumbar backache each time her drainage stopped. This was entirely relieved during her early convalescence until she bridged over her sinus tract and then the backache returned. It disappeared again after the external opening was enlarged and drainage again provided. She has had no return since the tract finally healed completely. The abscess was apparently acting as the focus for the absorption of the infective material responsible for her backache.

#### Summary

1. Fistula in ano constitutes from fourteen per cent to twenty per cent of patients seeking relief from rectal disorders and three-tenths per cent of all patients.
2. Fistula is always preceded by an abscess in the perianal or perirectal tissues.
3. Prophylaxis of fistula consists of the recognition and early treatment of cryptitis and perianal infections.
4. Incontinence is rare after proper division of the external sphincter and careful postoperative management.
5. Accurate determination and incision of the internal opening is of paramount importance in the relief of this condition.
6. Careful attention to the postoperative management of this type of operation is essential to good results as it is in all other rectal wounds.

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*Discussion on Paper by Dr. George F. Eubanks*

DR. J. C. PATTERSON, Cuthbert: Dr. Eubanks has so thoroughly covered his subject that it does not leave any room for discussion. We can only agree with him. I should like, however, to stress the importance of unroofing and trimming the edges of the



wound, and particularly the importance of the post-operative care.

A friend of mine in Denver who sees a great many tuberculous fistulae says that he no longer operates upon them. He simply exposes them to sunlight and gives the regular treatment for tuberculosis. In this way they will get well without an operation, whereas before, following an operation, they almost always recur.

DR. MARTIN L. MALLOY, Vienna: As I haven't had an opportunity of speaking to Dr. Eubanks, I would judge from this very excellent paper that he must be a former student of Dr. Hirschman of Detroit. The methods he mentioned are those almost entirely developed by Dr. Hirschman many years ago and will give the best results in most cases. The paper is most complete and the only thing I can add is the injection of bismuth paste before the operation. I think this is especially important for a surgeon who isn't experienced in fistula surgery. Certainly it can do no harm provided the operation is done soon after the injection. The line of paste shows clearly the course of each tract and there is very little chance of overlooking the side tracts you mentioned.

The after-care of the patient is probably more important than the operation. These patients must be seen every day by the surgeon himself or an assistant who has had training in the after-care of rectal cases.

Dr. Eubanks has covered thoroughly this very important field of surgery and I am very glad of the opportunity of hearing his paper.

DR. LON GROVE, Atlanta: I want to warn against trying to do the radical operation for fistula in the presence of an ischio-rectal abscess. This is the cause of the larger percentage of incontinence following operation for fistula, and is a mistake.

DR. GEORGE F. EUBANKS, Atlanta: Regarding bismuth paste, if there is any solution or preparation that should be injected into a fistula at operation, other than the hydrogen peroxide, it is yellow bismuth paste. I don't use it often, because the fistulous tract is always lined by a dirty gray membrane. If you are not able to trace it out with your probes and hydrogen peroxide, bismuth paste injection is the next best step.

In reply to Dr. Grove's question, I should like to most heartily agree with him. It was my privilege to work with Dr. Barga and Dr. Buie at the Mayo Clinic. Dr. Barga was almost rabid on the subject of operation in the presence of acute ulcerated colitis. We have had several patients die from a bacteremia in the presence of acute ulcerated colitis of the Barga type. I think Barga has something there. I think he has hit the nail on the head. The other question is the operation in the presence of acute abscess, and I think that it is definitely contra-indicated. You rob the patient of the chance of getting well. It is much better to wait until the inflammation subsides before making an incision into the sphincter muscle.

## THROMBO-ANGIITIS OBLITERANS\*

ROBERT L. KENNEDY, M.D.

*Metter*

Thrombo-angiitis obliterans, variously known as Buerger's disease, pre-senile gangrene and names less accurately descriptive, first emerged from comparative obscurity with Buerger's report in 1908. General interest has enjoyed marked acceleration in the past ten years and reports from the larger clinics prove that it is not only more prevalent but that greater strides are being made in its diagnosis and treatment.

I regret that I do not know of any book on surgery or medicine which gives a good discussion of the subject. In most of our recent volumes thrombo-angiitis obliterans is never mentioned.

### *Etiology*

The etiology remains unsolved. The immoderate use of tobacco has long been suspected clinically of being instrumental in its causation. Smoking is almost universal among its victims. Although the increase in the use of tobacco and the possible increased incidence of the disease may bear relationship, this far from explains its continued rarity among females. Coller has shown that tobacco causes vasoconstriction.

Contrary to previous beliefs the disease seems to be equally divided among the races and the various occupations. A large percentage of cases show foci of infection, which, together with the inflammatory appearance of lesions in the blood vessels, seems to point to an infection or bacterial toxic foundation as the etiologic factor. Ill fitting shoes, and calluses and deformities of the feet undoubtedly play a role in some cases.

Symptoms of near arterial occlusion may follow excessive exercise or exposure to extreme cold over a long period of time.

### *Pathology*

The disease is essentially of a chronic inflammatory nature affecting chiefly the larger arteries and veins of the lower extremity. Upper extremity involvement is next in order of frequency, and cases of involvement of

\*Read before the Medical Association of Georgia, Macon, May 12, 1933.



Figure 1

T. A. O. showing comparison of feet and legs. Note rubor and swelling left ankle and flexed toes, also absence of hair on left leg. (Preoperative.)



Figure 2

T. A. O. Lateral view showing gangrene of little toe, erythematous path across dorsum of foot, flexion of toes. Inflammation lower 3rd leg. (Preoperative.)

cerebral, coronary, mesenteric and spermatic vessels have been reported. Early in the disease the adventitia becomes thickened and infiltrated with lymphocytes. The intima proliferates, the cells assume a radial arrangement and a thrombus fills the lumen of the vessel. Vascular involvement and consequent tissue damage and symptoms vary so that the indications for treatment are not clear cut. Each case requires highly individualized study before the best type of treatment can be selected.

#### *Symptoms*

Most patients present signs and symptoms found in conditions where there exists a markedly deficient circulation. Pain, which is an outstanding symptom, is of a constant intense burning nature with more or less localization. I know of no pain that is more destructive to nervous or psychic equilibrium. Patients will beg for amputation.

Intermittent claudication, insomnia, restlessness and an ischemia of the part with lowered tolerance for cold is almost always present. The extremity will become cyanotic, more painful and cold with the patient in upright position, and will blanch on elevation. There is a lowering of the surface temperature and there may be an absence of peripheral pulsation.

In the majority of cases, the above symptoms plus the beginning of an erythematous path, trophic disturbance, gangrene or ulceration will cause the patient to consult physician. The unmistakable cadaveric hue when the extremity is elevated is an outstanding symptom and it has been authoritatively stated, that an extremity which becomes cadaveric in less than two minutes of elevation or cyanotic on dependency in a like time is deficient in circulation, regardless of the pulsation in the peripheral arteries. One should not forget that there is sometimes a vasomotor influence superimposed on a case of arterial obstruction.

#### *Diagnosis*

The surgeon should first familiarize himself with the tests for spasm and occlusion. The degree of vasodilatation and consequent increased blood volume in the extremity during systemic fever can be determined calorimetrically. A formula has been devised by which the "vasomotor index" can be determined. It is arrived at by subtracting the rise in mouth temperature from the rise in skin temperature of the affected extremity, and dividing the results by the mouth temperature. Indexes vary in different individuals from 0 to 6.5, the zero index showing no available vasodilatation.





Figure 3

T. A. O. Lateral view showing dry gangrene whole of fifth toe. Erythema dorsum second and third toe. (Preoperative.)



Figure 4

T. A. O. Site of injection Post. Tibial N. Note growth of hair and size of leg, flat foot. (Postoperative).

In the differential diagnosis one has to consider Monckeberg's arteriosclerosis, senile arteriosclerosis, diabetic gangrene and vasomotor disturbances that occur commonly in young females with normal pulsation of the arteries, upper extremities, rapid response to novocain block and no development of collateral circulation.

Thrombo-angiitis obliterans is more or less easily diagnosed from any of the above with the exception of Monckeberg's arteriosclerosis which is unilateral, lasts months, produces gangrene early and does not respond to foreign protein injection. Thrombo-angiitis obliterans occurs between the ages of 40 and 50, usually in Hebrews, and the development of a collateral circulation is usually good.

Senile arteriosclerosis comes late in life, the duration of symptoms is shorter, the extremity affected is almost always the lower. In this disease, unilateral gangrene appears early, the x-ray shows the vessels, there is slight response to foreign protein, and there is a fair development of the collateral circulation.

Diabetic gangrene may be ruled out by laboratory and clinical symptoms.

#### *Treatment*

The principle involved in the management

of this condition should be conservation or reestablishment of the circulation. Other important factors to be considered are the comfort of the patient, the prevention of a major amputation, and the restoration of function. To obtain these results we should resort first to the more conservative line of treatment, giving it a thorough trial, rather than prompt major amputation, drastic and spectacular procedure of ganglionectomy or the traumatizing radicotomies, for as has been shown from a review of the literature these procedures do not always cure. Such operations are not applicable to all cases even though physiologically indicated.

There is no specific treatment for thrombo-angiitis obliterans as such; however, the underlying principle of maintenance or reestablishment of circulation should be our goal. Removal of all foci of infection which would tend to lower resistance should not be neglected. Smoking should be limited or stopped. An occupation requiring little walking should be advised. Methods of treatment have varied with individual theories of etiology.

Allen's modification of Buerger's postural exercises plus contrast baths and radiant heat, which is furnished by carbon filament bulbs, arranged in an arch fitting over the affected



Figure 5  
Scar after removal of fifth toe, 5 cm. distance from site of line of demarcation. (Postoperative).

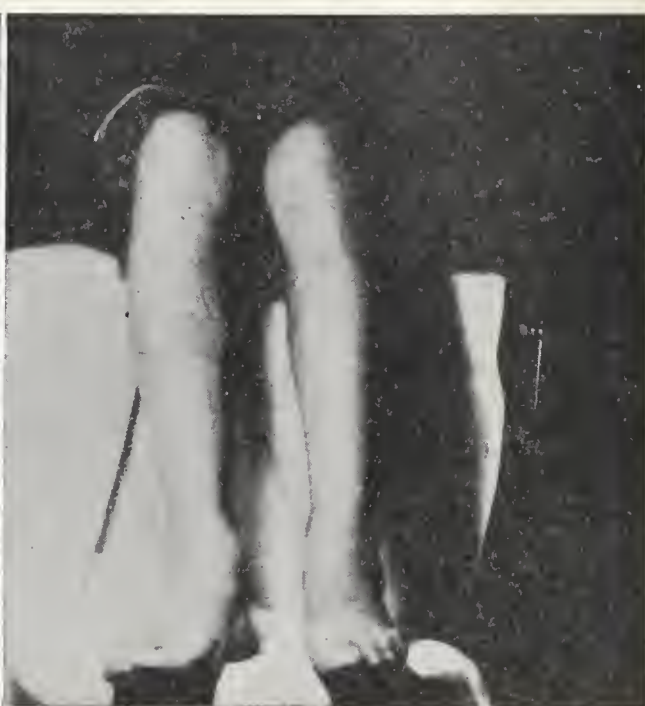


Figure 6  
T. A. O. Ant. view showing removal of fifth toe causes no handicap in wt. bearing, using larger plantar flap. (Postoperative).

extremity, should be employed routinely. The patient should take at least one gallon of fluid, plus a high caloric diet, daily.

Daily hygiene for the feet, dressing of ulcerations and the use of a mild antiseptic to the parts should not be overlooked. I have obtained best results with warm saline for cleansing, a solution of hexaresorcinol as an antiseptic and gauze saturated with one per cent phenol in equal parts of balsom Peru and castor oil. A balkan frame attached to the bed will not only aid the patient in moving about but will tend to prevent bedsores and encourage exercise of the upper extremities and trunk.

#### *Non-Operative Treatment*

Steel thought that the coagulation time of the blood was shortened and suggested intravenous injection of sodium citrate. Others believed the viscosity of the blood was increased and used Ringer's solution. Drugs which cause vaso-dilatation seldom ever produce any beneficial results in a frank case of thrombo-angiitis obliterans. Foreign protein therapy was first suggested by Goodman and Gottesman in 1923. Its merit has become widely recognized. In a series of 150 cases reported by Barker it was found of value in 75 per cent. Objects sought were relief of pain and improvement of circulation. Triple

typhoid vaccine has been given intravenously in initial doses of twenty to fifty million bacilli. As tolerance was acquired the dose was increased to produce a satisfactory febrile reaction. About an hour after receiving the vaccine, the patient experiences headache, nausea and pains in the joints and muscles, followed by a chill with onset of fever. These unpleasant symptoms finally disappear and the patient becomes more comfortable, and may observe a gratifying sense of warmth in the affected extremities. When typhoid vaccine is given intravenously there is a characteristic reaction. The peripheral circulation becomes slower during the first hour and associated with it there is a decrease in surface temperature with a generalized chill. As the mouth temperature reaches its peak, three to six degrees above normal level, the circulation in the peripheral vessels becomes speeded up to a degree far greater than it was originally. Associated with this phase is a rise in peripheral surface temperature which is maintained for several days after the mouth temperature has returned to normal. It is thought that the relief from pain and the improvement in the circulation is due to increase in surface temperature, which in turn is due to the action of foreign protein on the sympathetic nervous system.



By use of typhoid vaccine a few borderline cases of gangrene may be saved amputation, and in others the level of amputation can be lowered. In suitable cases, this foreign protein therapy should be tried prior to amputation of extremities with moderate gangrenous changes. The chill phase of foreign protein reaction is undesirable and slightly conducive to thrombosis and this treatment should not be used where there is arteriosclerosis of any marked degree unless there has been a preliminary heating of the extremities by means of electric pads, hot water bottles and blankets for at least one-half hour before giving the vaccine. Dr. Frank Freeman Smith has shown that if this is done there is sufficient heat in the extremities to counteract the chilling process and consequently slowing of the blood stream in the capillaries which otherwise occurs in the first phase of the reaction. Taking this precaution, thrombosis in peripheral arteries is less likely to occur. Patients given this treatment should remain in bed at least twenty-four hours after each dose, which can be given at weekly intervals, with or without increase in dosage, depending upon reaction.

Should satisfactory vasomotor response be produced, treatment may be given as often as every three to four days or only once every three to four days or only once weekly. When prolonged treatment is necessary a rest of a month is advisable between courses of twelve to sixteen injections. The patient who is suitable for this type of therapy will probably be without pain and his trophic changes will disappear and he may be able to resume his occupation and lead a comfortable if sedentary life. Occasional courses of treatment are advisable even in the absence of the evidence of progression of the disease. The result sought is the establishment of sufficient collateral circulation to care for the needs of the extremity. This may be accomplished even with complete occlusion of all the larger arteries.

Villoret and Justin-Besancan in Paris and Waters in the United States have reported the use of acetylcholine hydrochloride. It appears to produce all the desired effects obtained by the use of foreign protein and is fraught with none of its unpleasantness

or danger. Radium chloride given intravenously occasionally relieves pain. It produces no systemic reaction or vasodilation nor is its action understood.

### *Operative Treatment*

The earliest surgical attempt to overcome arterial spasm was peri-arterial sympathectomy. This procedure does elevate surface temperature and in some cases relieves pain for a short time; however, these reactions are of short duration and can be accomplished by simpler methods.

Alcoholic injection of peripheral nerves below the main muscular branches will not only relieve pain, but will in most instances result in improvement of local circulation. I have obtained excellent results with this method of treatment and I would suggest that it always be tried prior to major amputation or lumbar sympathectomy.

Royle, in 1924, devised the surgical procedure known as lumbar sympathectomy for relief of spastic disturbance of the extremity. Adson later adopted the abdominal route and removed the second, third and fourth lumbar sympathetic ganglia and their connecting rami. Following this operation it was noted that the extremities were normal and remained so as shown by skin temperature and colorimetric tests. The rationale of using this technique in the treatment of thromboangiitis obliterans followed Brown's observation that there was a vasoconstrictor factor present similar to that in Raynauds disease. The selection of patients suitable for lumbar sympathectomy rests upon the ability to demonstrate adequate vasodilation during systemic fever. Lumbar sympathetic neurectomy in the presence of an open ulceration may be followed by disastrous results, for a virulent streptococcus may be dormant in such a lesion.

### *Summary*

Patients with thromboangiitis obliterans except those with advanced gangrene are benefited by treatment with foreign protein. In patients with advanced gangrene the level of amputation may be lowered. Alcoholic injections of the posterior tibial nerve will, in some cases, prevent major amputation and restore circulation and function.

The available vasodilation can be determined by skin temperature tests.

#### *Report of Case*

*History*—A white, male, banker, aged 38 was seen complaining of pain, swelling and weakness of the left foot and ankle of one month's duration. The foot became purple, painful and cold at the end of the day's work and the left leg seemed smaller than the right. The pain in the ankle was throbbing in nature while that in the little toe was a burning type and he felt as if he had suffered a sprained ankle. The disease grew progressively worse and an "inflamed" foot caused him to consult the doctor.

He had suffered smallpox and a contused left hip in childhood which necessitated the incision of inguinal glands. He had malaria in 1910, influenza in 1918, tobacco heart in 1930, tonsillitis in 1931 and for the past three years has suffered hypertension. For the past year he had noticed a painful callous on the left foot. He denied venereal infection. He had been a heavy smoker for 22 years and used coffee and whiskey in moderation. He had worked in a bank for 20 years, averaging about eight hours daily on his feet. The family history was essentially negative.

*Physical Examination*—The patient was a well developed, middle aged man, lying quietly in bed. His tongue was heavily coated and there was advanced pyorrhea present. A posterior nasal discharge was present and his tonsils were infected. His heart was moderately enlarged and his heart sounds were distant. There was sclerosis of the larger palpable arteries. The pulse was 88 and the blood pressure 178/92. The chest and abdomen were normal. There was a scar near the left groin.

The left foot was cyanotic with an erythematous patch on the little toe and there was no pulsation in the peroneal or tibial arteries. The left leg was 2 cm. smaller than the right leg and was cold to the touch. After two minutes' elevation the left leg took on a cadaveric hue. The left foot and ankle were swollen and painful to touch or manipulate. There was a faint erythema the size of a match head on the top of the small toe which was also painful to touch. There was a callous the size of a quarter on the sole of the left foot. There was a pulsation in the upper popliteal space.

*Laboratory Examinations*—A complete blood count, Wassermann test, spinal fluid and urinalysis was normal. A roentgenogram of the hips, legs and feet showed no evidence of pathology but there was some calcification of the iliac veins above Poupart's ligament.

*Course and Treatment*—A diagnosis of thromboangiitis obliterans was made. Four days later the ischemia and the intermittent claudication became more intense and the erythematous patch on the small toe doubled in size. On the eighth day dry gangrene of the distal phalanx of the small toe was noted and the entire dorsum of the left foot was deeply injected. One week later the entire toe had become gangrenous and the foot was swollen and cyanotic. Local and sys-

temic medication, including morphine, one-fourth of a grain, every four hours, failed to exert a beneficial influence upon the disease. Glucose, caffeine, sodium iodide and sodium cacodylate were given intravenously with an increase of the temperature by mouth but with no appreciable increase in the surface temperature of the leg.

At the end of the third week a periarterial alcoholic injection was done under local anesthesia, using the left femoral artery in the femoral canal. This injection caused slight increase in the surface temperature and the ischemic pain in the foot and toe decreased in severity, but in less than three weeks all symptoms returned and the patient's general condition grew critical.

On October 5th, two months after the onset of the disease, the posterior tibial nerve in the lower third of the leg was ligated under general anesthesia and 95 per cent ethyl alcohol was injected into the ligated portion. The little toe was then amputated 5 cm. beyond the line of demarcation. Two days later the pain had decreased so that an occasional dose of sodium amytal kept the patient comfortable. At this point the wound at the site of the amputation became infected and for two weeks there was marked pus formation and a greatly inflamed foot with the body temperature ranging from 99 to 103 degrees daily. I feel certain that this infection facilitated the reestablishment of the circulation. The wound soon healed and one month after the amputation he could bear his full weight upon his left foot. He returned to work and has remained well except for occasional swelling of the left leg if he is on his feet too long.

*Comment*—Posterior tibial nerve injection relieved the ischemic pain in this patient and probably prevented a major amputation. Foreign protein injections were not given in this case because the patient had a continual elevation of temperature and the reaction to intravenous medication was too severe. Lumbar sympathectomy, although physiologically indicated, might have produced disastrous results because the patient was a poor surgical risk and because the foot became infected. Even after lumbar sympathectomy some patients have to suffer a major amputation.

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*Discussion on Paper by Dr. Robert L. Kennedy*

DR. F. G. HODGSON, Atlanta: This is an excellent presentation of the subject and I am glad to have heard it. There is one point I wish to make. These cases come to the orthopedic surgeon, usually diagnosed



as flat feet. They come in with pains in the feet and legs, similar to those complained of in fallen arches. I should like to stress the necessity of testing the circulation in the feet of any patient who complains of pain in the feet and legs.

In the past we have felt rather hopeless about these cases. We thought a high amputation would have to be done in practically every case. Now we are getting them early, and we recognize them before the circulation is completely cut off, and by the conservative methods suggested, we can often save these limbs and let the patients live comparatively useful lives. We get them early, and use the "fever" treatment, improve the circulation, change the occupation, and put less strain on the circulation, make them cut out tobacco, and very often they will escape this last stage and its serious consequences.

DR. ROBERT L. KENNEDY, Metter: Due to the fact that great strides have been made in recent years in the treatment of thrombo-angiitis obliterans and that our knowledge of the nervous system is steadily growing, I am certain that we are now in a position to not only make an accurate diagnosis but to give relief. We are also able to prevent major amputations and restore function.

In closing I would like to stress the following relative treatment. Removal of all foci of infection, correction of deformities such as flat foot, removal of growths that retard circulation to an extremity or cause pressure on a nerve should be accomplished. Calluses and ill fitting shoes undoubtedly play a role in some cases. Smoking should be stopped, for as has been proven, the immoderate use of tobacco is detrimental to the nervous system.

More specific treatment consisting of foreign protein, postural exercise and nerve injection should be employed prior to lumbar sympathectomy or major amputation.

#### TRI-STATE DIETETIC ASSOCIATION

The Tri-State Dietetic Association will hold its fifth annual meeting at the Piedmont Hotel, Atlanta, February 17th.

Dr. R. S. Leadingham, Atlanta, will speak on "Diet in Chronic Colitis".

Dr. Jas. E. Paullin, Atlanta, on "Diet in Relation to Diabetes".

Dr. M. Hines Roberts, Atlanta, on "Infant Feeding".

Dr. Quindara O. Dodge, President of the American Dietetic Association, will speak on "Developments and Possibilities of the Administrative Dietetic Course".

Dr. (Miss) Sybil Smith, Assistant in the Experimental Department of the United States Department of Agriculture, will lecture on the "Newer Trends in Nutrition".

Members of the Medical Association of Georgia and the Woman's Auxiliary are cordially invited.

## ATABRINE IN THE TREATMENT OF MALARIA\*

R. L. MILLER, M.D.

Waynesboro

Every student of malaria knows that it is dependent upon two hosts for its dissemination—man and the *Anopheles* mosquito. Every person who has suffered an acute attack of malaria should be regarded as a potential carrier of malaria, until it has been proved by two or more laboratory examinations of his blood that he is free of the malarial parasite.

It is the duty of the health officer to prevent, as nearly as he can, the breeding of mosquitoes. It is the duty of the physician to see that his malarial patient is not a source of infection to the mosquito. Every physician who treats malaria should keep these facts constantly in mind. He should approach each case determined not only to cure his patient of the acute manifestation of the disease, but to prevent the infection of the mosquito. His duty does not end here for he should follow up his malarial patients, when possible, until he knows that their blood is free of the parasites. This you may say is a Utopian idea and is impossible of attainment. Fortunately, it can be done with the proper protection of the patient from the mosquito and the administration of certain drugs that destroy the sexual forms of the parasite.

There has been placed on the market within the past few years a synthetic anti-malarial agent under the trade name of atabrine.

"Atabrine has been synthesized as a result of further research work on plasmochin, but is based on a different heterocyclic ring system. It is an amino-acridine derivative with alkyl groups, and occurs in the form of a yellowish, water soluble powder of bitter taste." Atabrine has been extensively used in the malaria-infested countries of Europe and South America. The United Fruit Company has used it in their hospitals in

\*Read before the First District Medical Society, Savannah, Georgia, July 18, 1933.

(Continued on Page 40)



# THE JOURNAL

OF THE  
MEDICAL ASSOCIATION OF GEORGIA  
Devoted to Welfare of Medical Association of Georgia

139 Forrest Avenue, N.E., Atlanta, Ga.

JANUARY, 1934

## CANCER IN THE YOUNG

It is the object of this brief paper and the series of papers to follow by other members of the Cancer Commission of the Medical Association of Georgia to bring before the medical profession of the state and impress by repetition the terrible toll that cancer is taking. It is hoped that, if the physician will bear this condition constantly in mind and make more careful physical examinations, an earlier diagnosis may be made and the death rate from cancer in our state reduced.

The distribution of cancer in children and adults varies markedly. In adults the stomach, uterus, breast and liver lead in the order named. In children, due to congenital tumors, the kidney, eye, bones, brain and meninges are affected in the order named, these four organs being the location of over half of the tumors of childhood. As to relative frequency of cancer in childhood, records on two thousand cases from one clinic give only forty-two cases or 2 per cent occurring under the age of fifteen. The mortality rate in children is remarkably low. The total deaths reported in the United States from cancer in 1914 was 54,400, and of these less than 1 per cent occurred in all children under fifteen years of age.

Within recent years there has been a marked increase in reported cases of cancer. This does not mean necessarily that cancer is increasing, but only that more cases are being reported due to more careful diagnosis and better co-operation with the bureau of vital statistics. This is also true of appendicitis and a number of other diseases that were formerly given a wrong diagnosis.

The three main groups of tumors in children include tumors from connective tissue, tumors from epithelial tissue and mixed tumors. The majority of tumors in children are of connective tissue origin. However, a large number, especially in the first two years of life, are of the mixed cell type. These

are usually congenital from groups of misplaced embryonic cells and it is this type that causes the death rate from cancer to be four times as high in two-year-old children as compared to those of fourteen or fifteen years. The epithelial tumors, while rare, must not be overlooked.

I shall consider the sarcomas, the tumors of connective tissue origin. The etiology of sarcomas in children, as in adults, is purely theoretical. Among the most likely contributing factors are irritation, misplaced groups of embryonic cells and malignant changes in existing tumors of benign type.

The prognosis depends first on an early diagnosis and removal of the tumor in its entirety. Failing in this the prognosis depends on the type of cell. The solitary spindle-cell growths are more generally cured by early excision. The round cell forms are very malignant and the osteo-sarcomas are rapidly fatal with metastasis to the lungs. The disseminated and melanotic varieties are fatal in a short period of time.

*The JOURNAL would like to record the scientific work of Georgia doctors. It earnestly requests, therefore, that each physician in the State who publishes a contribution in some other medical periodical submit an abstract of the article for these columns.*

The general system is affected about the same in children as in adults, there being no difference in the points of diagnosis with the exception that certain tumors occurring in the developmental stage are associated with rather marked abnormalities of development, especially so in relation to tumors of the pineal body, the gonads and the adrenals which cause premature physical and sexual development. Therefore, any precocious physical or sexual development of a child should be looked upon as suspicious of a developing malignancy as the underlying cause.

It is to be remembered that in sarcoma it is the rule for pain to precede the appearance of the tumor. This is important in that it brings the child to the physician early. This early appearance of pain is especially noticeable in sarcoma of the bone. The con-

tinual complaint of pain in the case of children over the long bones should arouse our suspicion, especially when this pain is more marked on rest than during exercise. This feature distinguishes it from inflammatory conditions which are aggravated by exercise.

If every patient with cancer could be examined early and brought to operation within a few weeks after the appearance of the tumor, an experienced and competent surgeon would be able to remove the malignancy in its entirety before invasion and metastasis had occurred and in a vast majority of cases obtain a cure.

As stated in the beginning, it is the object of this paper and the ones to follow to impress on the medical profession not only the frequency of cancer but the need for early diagnosis. Although there are some very malignant tumors which metastasize before they can be diagnosed, still the greater number can be recognized before they spread and at the present time our only hope of lowering the cancer death rate is by eternal vigilance to bring these cases to early operation.

ALBERT F. SAUNDERS, M.D.

Valdosta.

#### THE SOUTHERN SURGICAL ASSOCIATION

##### *Forty-Sixth Annual Meeting*

The Southern Surgical Association held its 46th annual meeting at the Homestead Hotel, Hot Springs, Virginia, December 12th-14th, 1933. The meeting was the largest in the history of the organization, more than 250 members, ladies and guests being present. Dr. Vilray P. Blair, of St. Louis, presided.

The program of scientific papers was highly interesting and instructive. One of the outstanding contributions was made by Dr. Harvey B. Stone, of Baltimore, on *Living Grafts of Endocrine Glands*, illustrated by moving picture micro-photographs. In this paper Dr. Stone described the method of removing tissue cells from the thyroid or parathyroid glands and growing them in a culture medium made from the blood serum of the prospective recipient of the transplant. The tissue by this method becomes adapted to its future host and when finally implanted in the host grows normally and survives for an indefinite time. Only a few cells from the healthy donor are used and the missing tissue is readily replaced. Dr. Stone described two cases in which patients were cured of tetany and one case in which a patient was cured of hypothyroidism by the use of this method.

Another valuable paper was that of Dr. Walter E. Dandy, of Baltimore, on *Treatment of Trigeminal*

*Neuralgia by the Cerebellar Route*. From his study of trigeminal neuralgia Dr. Dandy believes that the idiopathic disease is a misnomer and that some definite anatomical or pathological cause is always present whether it is discovered or not. He described several cases of the disease which proved to be caused by aneurysms and anatomical anomalies of the cerebral arteries. The approach to the gasserian ganglion by the cerebellar route affords opportunity for examining the cerebral arteries.

The discussion of *Chronic Sacro-iliac Sprain with Attendant Sciatica*, by Dr. Reginald H. Jackson, of Madison, Wisconsin, attracted much attention, being accompanied by graphic motion pictures. Dr. Jackson employs spinal anesthesia in the reduction of sacro-iliac luxations in which reduction is accomplished by hyperflexion of the thigh on the abdomen.

The whole program was accentuated with papers on gynecological subjects. Two of the most interesting of these being the paper on *Vaginal Hysterectomy*, by Dr. J. Shelton Horsley, of Richmond, Virginia, and one on *Granulosa-cell Ovarian Tumors as a Cause of Post-menopausal Bleeding*, by Dr. Emil Novak, of Baltimore.

The Southern Surgical Association has always been a forum for discussion of aneurysm, due largely to the leadership of Dr. Rudolph Matas, the distinguished pioneer of the surgery of aneurysm. Drs. Dan Elkin and J. L. Campbell, of Atlanta, presented an excellent study of sixty-six cases of aneurysm observed in the Grady Hospital. Dr. Matas reported cases of thrombophlebitis caused by strain of the axillary vein, while Dr. I. M. Gage, of New Orleans, told of a case of aneurysm of the external iliac artery.

The paper of Dr. Roy D. McClure, of Detroit, Michigan, on *Esophageal Diverticulum, in which* he described a new operation for the condition, precipitated an interesting discussion of the subject. In the paper of Dr. Waltman Walters, of Rochester, Minnesota, on *Ureterosigmoidal Transplantation for Exstrophy of the Bladder*, Dr. Walters paid a high tribute to one of the foremost contributors to this subject, Dr. Robert C. Coffey, of Portland, Oregon, a member of the association whose untimely death occurred a few months ago.

In *The Present Status of Transurethral Prostatectomy*, Dr. Owsley Grant, of Louisville, Kentucky, presented a complete essay on this live topic. In his paper on *Imperforate Anus*, Dr. Robert L. Rhodes, of Augusta, Georgia, reported a most unusual case which was handled in a unique and successful manner. In all thirty-six papers were given with free discussions.

One of the outstanding features of the meeting was the address by a former member of the Association, Dr. Howard A. Kelly, of Baltimore, on, "Some of the Steps We Have Taken within the Past Hundred Years." In this address Dr. Kelly mentioned some of the high points in the development of surgery during the past century. During his remarks he mentioned the fact that last summer he purchased from a second-hand bookstore in Toronto, Canada, a used copy of Godlee's



"Life of Lord Lister." On opening this book at home a short time later he discovered a letter written in long hand by Lord Lister to his father, which he began, "My Dear Father," and ended, "Your affectionate son, Joseph Lister." The letter was beautifully written with pen and ink, as few men can write today. It was dated in 1867, just a few months before Lister announced his discovery of antiseptic surgery. Any letter written by Lord Lister would be valuable, but this one was of more than ordinary importance, because in it Lister told of three cases of compound fracture which he had cured by his carbolic acid treatment and which foretold the announcement a few months later of the greatest discovery in surgery, antiseptis. Dr. Kelly showed the book and letter to the audience. He said that he offered to return the letter to the bookseller, but was told that he could keep it. However, the bookseller was rewarded with a substantial check.

Fourteen new members were added to the roster of the Association, one of them being Dr. Walter R. Holmes, of Atlanta. Officers chosen for 1934 were Dr. Frank K. Boland, Atlanta, President; Drs. J. H. Neff, Jr., University, Virginia, and E. P. Hogan, Birmingham, Alabama, Vice-Presidents; Dr. Robert L. Payne, of Norfolk, Virginia, continues as Secretary.

Active membership of the Association is limited to 200. After membership of twenty years a Fellow is eligible to become a senior member. It is an unwritten law that meetings are held in the south and that the officers be members from the south, although there is always a good sprinkling of members from other sections of the United States.

The next meeting of the Association will be held December, 1934, at the Hotel Cloister, Sea Island, Georgia.

### SOUTHEASTERN SURGICAL CONGRESS

#### *Nashville Meeting*

The Southeastern Surgical Congress will hold its fifth annual assembly in Nashville, Tenn., March 5, 6 and 7. The Andrew Jackson Hotel will be hotel headquarters and the lectures and exhibits will be in the War Memorial Building.

The following doctors will occupy places on the program: Fred H. Albee, W. Wayne Babcock, S. O. Black, Vilray P. Blair, Frank K. Boland, J. B. Brown, D. B. Cobb, George W. Crile, T. C. Davison, John F. Erdmann, P. G. Flothow, Seale Harris, M. S. Henderson, Arthur E. Hertzler, Chevalier Jackson, Walter C. Jones, Dean Lewis, Joseph F. McCarthy, C. Jeff Miller, A. J. Mooney, John J. Moorhead, Edward T. Newell, Fred Rankin, Paul H. Ringer, Stewart Roberts, George H. Semken, Phil C. Schreier, Arthur M. Shipley, H. E. Simon, A. O. Singleton, J. R. Young and Waitman F. Zinn.

Communications with reference to the convention should be addressed to Dr. B. T. Beasley, 1019 Doctors Building, Atlanta, Ga. For hotel reservations address the Andrew Jackson Hotel, Nashville, Tenn.

### TO THE MEMBERS OF THE MEDICAL ASSOCIATION OF GEORGIA

The Fulton County Medical Society extends you a cordial invitation to attend a series of lectures to be given by Dr. Richard Shatzki, of Boston, on *The Relief Method of Examining the Gastro-intestinal Tract*. The lectures will be given at The Academy of Medicine, 38 Prescott Street, N.E., Atlanta, beginning Monday evening, February 5, 1934, at eight o'clock and continuing each evening thereafter through Friday.

Dr. Shatzki is one of the outstanding radiologists of this country. He was trained by Professor Berg of Frankfort, and for five years was the head of the radiological institute at Leipzig under Professor Morowitz. He was forced to leave Germany when the Nazis came into control and is now in Boston.

To those interested, a series of demonstrations of this method will be given during the day.

### CLASSES OF MEMBERS IN THE ASSOCIATION

The classes of members in the Medical Association of Georgia according to our Constitution and By-Laws are as follows:

1. *Regular Members*: They pay regular county society and state dues. (State dues for 1934 are \$6.00). They may hold any office and are given all benefits of the Association including Medical Defense.
2. *Honorary Members*: They may be elected only by county societies and are given all benefits and privileges of regular members, but pay no dues. This is the highest honor which can be conferred on a member.
3. *Associate Members*: They are eligible for regular membership but are not in very active practice and usually with a very limited income—also certain salaried physicians and members of the army, navy, U. S. Public Health Service, etc. They are privileged to attend and participate in all scientific meetings, but are not permitted to hold office, neither are they eligible for Medical Defense or entitled to the Journal.
4. *Intern Members*: They are interns in hospitals and are only privileged to attend and participate in scientific meetings.

The American Medical Association will reapportion its delegates this year. It will be necessary for us to have a full membership to retain all our three delegates in the House of Delegates of the A. M. A.

Please use your best efforts to enroll all eligible physicians in your county as members of the Association.



## MEDICAL SERVICE FOR CWA EMPLOYEES

A copy of instructions which has been sent by the United States Employees' Compensation Commission to the several state civil works administrators, relative to the selection of private physicians to treat employees of the Civil Works Administration, for illness and injury arising out of the performance of duty.

The United States Employees' Compensation Commission holds that the law requires that patients entitled to hospitalization and/or medical service at government expense be referred to non-federal hospitals and private physicians only when United States Hospitals and Medical Officers are not available.

## COPY OF INSTRUCTIONS TO CIVIL WORKS ADMINISTRATORS FOLLOWS:

"From—United States Employees' Compensation Commission.

To:—State Civil Works Administrators.

Re:—The Selection of private physicians for Compensation Work.

The list of physicians and surgeons, (Form CA-76), designated to provide treatment, where federal medical facilities are not available or are inadequate, was for your temporary guidance only, as indicated by our telegram to you of December 22nd.

Please instruct your local administrations to consult the officers of their county or district medical societies at once to enlist the societies' cooperation as follows:

1. Ask them to share with you the responsibility of preparing a list of the local physicians to be authorized to provide treatment to supplement Federal Government medical facilities when these are not available or are inadequate. This list should include physicians in the locality (whether members of the local society or not) who are well qualified by training and experience to render compensation service, who are licensed to practice medicine in the state, and who desire to participate in this service under the regulations of the United States Employees' Compensation Commission. These regulations provide for fees not in excess of those charged by physicians generally to patients in the same income class as the injured person.

2. Have them indicate on this list physicians who, by training and experience, are especially qualified to handle unusual and special types of cases.

3. Request that they work out with you a mutually satisfactory plan for distributing the compensation work among the physicians on the list in as equitable a manner as possible. Any plan should provide for the immediate treatment of emergency cases, and for treatment by physicians well qualified to handle the particular type of case.

A cumulative record should be kept which will show the number of cases which have been assigned to each physician on the list."

Information supplied by the American Medical Association.

## HOSPITALIZATION OF C. W. A. WORKERS

Copy of instructions in reference to medical and hospital services for ill and injured employees of the Federal Civil Works Administration is published in this issue of the Journal on this page. This information has been published on page 136 of the Journal of the American Medical Association, dated January 13, 1934. The Journal of the A. M. A. will publish in a subsequent issue instructions relative to hospitalization of employees of the Federal Civil Works Administration.

## NEW MEMBERS FOR 1933

Banks, Geo. T., Fairmount.  
Carter, C. B., Columbus.  
Clower, R. J., Morven.  
Jones, A. B., Jr., Quitman.  
Liggin, Samuel B., Reynolds.  
Moye, C. G., Brewton.  
Stewart, Jas. A., Portal.

## NEW MEMBERS FOR 1934

Alexander, W. H., Blakely.  
Arnold, J. T., Parrott.  
Brannen, O. C., Columbus.  
Brantley, J. G., Wrightsville.  
Chappell, Guy, Dawson.  
Cosby, F. L., Jr., Columbus.  
Cranford, O. G., Sasser.  
Darden, Holt, Blakely.  
Dexter, C. A., Columbus.  
Durham, W. P., Sasser.  
Evans, W. W., Blakely.  
Floyd, W. E., Statesboro.  
Harper, J. W., Hampton.  
Hogue, W. L., Villa Rica.  
Holt, R. R., Parrott.  
Jackson, J. L., Manchester.  
Johnson, C. D., Columbus.  
Kelly, Geo. W., Carlton.  
Lamar, Lucius, Dawson.  
McKinney, Wm. T., Cave Spring.  
Nutt, J. J., Bowdon.  
Powell, C. E., Swainsboro.  
Quarterman, P. C., Valdosta.  
Simmons, B. K., Blakely.  
Spruell, T. M., Temple.  
Threatte, Bruce, Columbus.  
Twitty, C. W., Elmodel.  
Veale, E. O., Arnoldsville.  
Ward, L. C., Damascus.  
Youmans, S. S., Oak Park.

## HONOR ROLL FOR 1934

1. Randolph County, Dr. G. Y. Moore\*  
Cuthbert, December 12, 1933.
2. Macon County, Dr. Thos. M. Adams,  
Montezuma, January 13, 1934.
3. Henry County, Dr. H. C. Ellis, Mc-  
Donough, January 18, 1934.

\*Deceased

## GEORGIA DEPARTMENT OF PUBLIC HEALTH

T. F. ABERCROMBIE, M.D., *Director*

## SOME NOTES ON THE WASSERMANN TEST

The Wassermann or complement fixation test for syphilis is one of the most complicated of laboratory procedures. Its complexity lends to chance of error in its every step. Therefore skill and constant vigilance is the price of reliability in so far as we can rely upon the test itself.

It seems that many physicians, even when the clinical symptoms apparently point conclusively to syphilis, prefer to have their diagnosis confirmed by a serological examination. It, of course, is of inestimable value in checking the effect of treatment toward an eventual cure. It is being included more and more in routine physical examinations, since it oftentimes brings to light unsuspected cases of syphilis. Industries are beginning to insist that their employees and applicants for employment present a negative serological test. In a good many instances homes are requiring the same of their domestic servants, likewise hotels and restaurants of their employees. The state law requires a negative Wassermann of all barbers and beauticians.

It seems that there is a growing public demand upon the physicians and through them upon the laboratories for such serological work. All well and good. That is as it should be. At the same time the average practitioner should probably become somewhat better acquainted with the limitations of the Wassermann test and the manner in which he can co-operate with the laboratory in rendering such service. The purpose of this paper is to acquaint him with some features of the test, preparation and submission of specimens and the interpretation of the laboratory findings.

There are probably as many different modifications of the Wassermann test as there are different types of automobiles, yet they are all Wassermann tests just as much as the former are automobiles. Each has its advantages in the mechanism, though they all are built on the same basic principles. Just as motorists prefer different kinds of cars, serologists prefer different methods of Wassermann procedure.

The technique employed by the State Department of Health Laboratories for the past few years is the two tube qualitative method devised by Dr. John A. Kolmer of Philadelphia, an outstanding authority on the subject. We feel that this method is well

adapted for conservative public health work where a large number of specimens have to be examined, and follows very closely the method approved by the Standard Methods Committee of the Laboratory Section of the American Public Health Association.

In the Wassermann test there are four reagents used in conjunction with the serum of the patient's blood specimen. First we have fresh red blood cells from the human or the sheep usually, washed free of other blood constituents. Next we have the blood serum (amboceptor or hemolysin) from an animal such as the rabbit which has previously withstood several intravenous injections of the red blood cells suspended in saline solution. The normal blood serum of the guinea pigs furnishes another reagent (complement). The fourth reagent, antigen, is an ether-alcohol extract made from heart muscle powder (beef) usually fortified with cholesterin. It is interesting to note that this non-specific antigen performs much better than an antigen made of the organisms of the disease.

Dosage of these reagents has to be determined by titration before they can be employed in the test. The complement is quite a variable factor and consequently has to be titrated against the amboceptor daily before use. These are rather sensitive adjustments of the reagents to each other and require much care and skill.

The periods of incubation in the different modifications of the Wassermann test vary from one hour in water bath at 37° C. to 14-18 hours in refrigerator at 6°-8° C. Our laboratory employs the long low temperature incubation, since we have found by parallel work with several hundred specimens that it gives more sensitive reactions, and yet comes well within the realm of conservatism. This causes some delay in delivery of the report, but we feel that this test should not be performed in undue haste and that the increased specificity of the test amply justifies the longer procedure.

At the outset it was stated that the Wassermann test is not an infallible guide. By this we mean that the reaction is not always positive in cases of syphilis. Seldom, however, is a pseudo-reaction obtained with a conservative technique. We believe that on account of the stigma of a positive report and the lack of opportunity of studying the clinical picture and of repeating the test if



deemed necessary, it behooves public health institutions not to employ the more sensitive modifications. As a general rule much more significance can be placed in positive than in negative reactions. But at the same time the laboratory report should not be accepted wholly within itself as the diagnosis, but only as one of the signs in the case before the physician.

Authorities state that the agreement between the Wassermann reaction and cases of syphilis varies with the stage of the disease. In the primary stage a range of 44 to 94 per cent agreement is obtained in cases as they present themselves with lesions from five days' to six weeks' duration. Since the Wassermann test is not constructed for the detection of the organisms, but for the presence of syphilitic "Reagin" in the blood stream, the Wassermann reaction is often negative in cases with primary lesions from which the organisms can be demonstrated by the dark field examination.

As to the time required for the formation of this "Reagin" after the appearance of the lesion, it cannot be definitely stated. It may vary very much in different patients. A period of three weeks is about the average time of duration of the lesion before the Wassermann becomes positive. In cases of suspected primary lesions, which give negative Wassermann reactions, the test should be repeated within one or two weeks' time, if facilities for dark field examinations are not available. Even if the dark field is negative, the Wassermann test should be repeated every few days until diagnosis is definitely established.

In the secondary stage of syphilis is found the closest agreement between the serological test and the presence of the disease. Since this is the most active stage, 95 to 100 per cent positive reactions are obtained by the averagely sensitive Wassermann procedure.

The greatest value of the serological test probably lies, however, in the detection of syphilis in the tertiary or latent stage. The agreement there runs usually 70 per cent and above. In this stage syphilis often confuses the physician with its seemingly unlimited ability to imitate the symptoms of many other diseases. The Wassermann test very often uncovers unsuspected cases of long standing.

The importance of checking the effect of treatment on the disease is well recognized. The laboratory offers the only means by which the physician can be guided in the continuance of treatment after the symptoms have disappeared. These tests should be repeated every few months over a period of

some two years after the Wassermann becomes negative and treatment has been discontinued.

It is sometimes difficult for physicians to understand the reasons why different results should occasionally be obtained from different laboratories on specimens of blood from the same patient. The personal equation should, of course, always be taken into consideration, but at the same time all the fault does not lie there. The physician may unconsciously be in error in the manner of submitting the specimens for such parallel work. He may obtain the specimens at different times and under different physical conditions of the patient. Craig has clearly demonstrated that the syphilitic "Reagin" content of the blood stream may fluctuate from time to time and even from day to day in some instances. This has been corroborated by other authorities and has been met with in our experience. It seems that this fluctuation is found chiefly in the latent stage of the disease.

The specimens though drawn at the same time may be submitted on different days or reach the laboratory under different conditions. This in some instances may account for discrepancies in results. Specimens for parallel work should be submitted in as parallel a manner as it is possible to do. Even then there is little wonder that some discrepancies will occur when we consider that some methods of procedure are less sensitive, some more sensitive and that the same method in the hands of the same technician may show some variation in results with different kinds of antigen.

Strongly positive, or three and four plus reactions usually are serologically diagnostic. As stated above, however, these should be supported to some extent at least by clinical findings. Positive, or two plus reactions, though not considered diagnostic, may be sufficiently suggestive, even in the absence of supporting symptoms, to warrant the repetition of the test. Weakly positive or one plus reactions are quite significant in the incipient stage and in checking the effect of treatment.

Plus, minus or doubtful reactions are simply those which are not sufficiently strong to call weakly positive, but yet cannot wholly be disregarded. They are so reported with request for another specimen which usually clears up the question. A single negative reaction within itself does not exclude the possibility of syphilis. The vast majority of reactions are either definitely positive or negative.

(Continued on Page 35)



## WOMAN'S AUXILIARY OFFICERS

President—Mrs. J. Bonar White, Atlanta.  
 President-Elect—Mrs. J. E. Penland, Waycross.  
 First Vice-President—Mrs. J. J. Pilcher, Wrens.  
 Second Vice-President—Mrs. R. C. Pendergrass, Americus.  
 Third Vice-President—Mrs. G. Hugo Johnson, Savannah.

Recording Secretary—Mrs. Warren A. Coleman, Eastman.  
 Corresponding Secretary—Mrs. E. A. Allen, Atlanta.  
 Treasurer—Mrs. Chas. Usher, Savannah.  
 Historian—Mrs. E. R. Harris, Winder.  
 Parliamentarian—Mrs. J. M. Barnett, Albany.  
 Editor—Mrs. W. A. Selman, Atlanta.

### DUTIES AND LOYALTY

Colonel and Mrs. Charles Lindberg have returned from an epoch-making flight. It certainly was a sacrifice on her part to be separated from her child. Yet, she went with her husband, not for companionship alone, but as a sharer in the difficulties and the objectives of the flight. Much of its success is already written as *her* contribution. She served her husband's profession in an arduous grueling test. We, as wives of physicians, may never have such a test, but we have at least the opportunity to SERVE.

Are you and you and you, under the guidance of your local advisory council, fulfilling the task assigned? Your name may not be in the skies, but if your effort at serving the medical profession will direct one person in the path of health, will mold one opinion from the way of quackery and cult, are you not willing? It is not only the amount of work we do, but that we do it. Our National President, Mrs. Blake, calls our attention to this slogan, "Undertake less; accomplish more." The Georgia program is specific and within the range of every member's capacity. If each one but asked one organization to have our program, would that take much time or effort? Is there one member who honestly cannot find time in the year to do this?

From the A. M. A. a news-letter, comes several items which call for our approval and attention. In Washington, the chairman of public relations in Seattle investigated, through her committee, public and school libraries; all books on quackery or written by unqualified authors on medical subjects were removed from the shelves devoted to medical literature. Throughout the state every effort was made to prevent practitioners of cults from lecturing on medical topics. In one instance a chiropractor who was attending physician to a high school football team was replaced by a well qualified physician.

Members of Richardson County, Nebraska, have designed and completed a kit acceptable to and accepted by the doctors working on charity cases during the winter.

Missouri had 562 subscriptions to Hygeia last year.

The Colorado Auxiliary has instituted a successful writing contest on the subject "Prevention of Disease Through Education." The Wisconsin Auxiliary has launched a state-wide essay contest "Tuberculosis, the Foe of Youth."

In Kentucky, Mrs. Menefee, President, reports progress on the Highway in Kentucky to be named for Jane Todd Crawford.

Last, two students, sons of Georgia physicians, are receiving assistance under the Student Loan Fund.

And do you know that our President-Elect is an author of many interesting articles in Georgia papers? Next time you see an article signed "Nell Bates Penland," read it and be proud. Mrs. Penland is doing excellent work in the Auxiliary and deserves your best support in membership work.

### SIXTH DISTRICT

The Auxiliary to the Sixth District Medical Society met in Milledgeville, December 6th with Mrs. H. D. Allen. Mrs. Wm. M. Cason presided. Mrs. Allen welcomed the members and Mrs. Rawlings responded.

Dr. Richardson addressed the Auxiliary and gave details of the Mother Welfare Program. Mrs. Bonar White explained the plans for writing county and district histories and urged immediate co-operation in this exceedingly important work. She also discussed the public relations work of the Auxiliary and subscriptions to Hygeia. She called attention to the necessity for co-operation with the Editor and Scrapbook Chairmen, and gave a brief resume of work accomplished by the State Auxiliary during the past six months.

Mrs. John A. Selden gave a report on Health Films; Mrs. Richardson asked for support of the Student Loan Fund. Bibb, Jefferson, and Washington Counties made reports and the new Auxiliary to Baldwin was welcomed. Mrs. Rawlings, Chairman of Constitution and By-Laws, read her report

and the district adopted it. It also adopted the new scrap book.

Mrs. Chas. C. Hinton, Mrs. Chas. C. Harrold and Mrs. S. T. R. Revell, Past Presidents of the State Auxiliary, gave greetings. Mrs. Revell read the report of the nominating committee and the election of officers concluded the meeting. Mrs. W. M. Cason, Sandersville, was elected Manager; Mrs. J. L. King, Macon, Manager-Elect; Mrs. Dawson Allen, Milledgeville, Secretary.

Mrs. H. D. Allen, Sr., and Mrs. Dawson Allen entertained the members at lunch, an occasion of festivity and delightful reunion.

### CHATHAM COUNTY AUXILIARY

The Auxiliary to the Georgia Medical Society reports excellent work. At the November meeting Dr. Sharpley gave a talk on Mother Welfare, discussion followed. The pamphlets on Mother Welfare are being distributed, social hygiene talks made and examination of servants being urged.

The Auxiliary bought some clothes and paid a boy's transportation to the Berry School. It donated three and a half dozen cans of tomatoes to the T. B. Sunshine Unit. A benefit party for the Student Loan Fund was most successful and \$100 remitted for the Fund.

Sets of three-minute talks were given to rural P.-T. A. Presidents. Ten workers for T. B. Tag Day were supplied from the Auxiliary.

The Auxiliary, after one meeting, had a tea in honor of Mrs. Baker, who was moving, and presented her with a silver bon-bon dish, in appreciation of her work as secretary of the Auxiliary.

### FULTON COUNTY

Fulton County made a fine contribution to the Christmas happiness of the little children at Grady Hospital,—tarlatan red stockings filled with nuts, candy, fruit and a toy. Jam and jelly were given for the pantry shelf.

The Red Cross Committee has been sewing and the Home Hygiene Chairman reports over 500 students in that course. Two health programs have been presented to the Auxiliary. Many organizations in Fulton County have had a Mother Welfare program and the Superintendent of Atlanta Public Schools took 54 sets of our three-minute talks and requested all the school principals to post one monthly. Some clubs have also taken them and are reading one monthly. The first showing in Georgia of a social hygiene sound film sponsored by the American Social Hygiene Association, was made possible through

the assistance of an Auxiliary member. Fifty dollars was remitted for the Student Loan Fund.

Copies of "Our Tasks" and the new Constitution and By-Laws have been distributed to members. Several combined dances and card parties have been given in honor of the Fulton County Medical Society.

Many important chairmanships in other organizations are held by members:—State Chairman of Social Hygiene for State League of Women Voters, Chairman of Social Hygiene for Atlanta League, and for the Fifth District P.-T. A.'s; Secretary and Treasurer of Georgia Social Hygiene Council, Chairman of Health for Atlanta Council of Parents and Teachers; Chairman of Health Atlanta Federation of Women's Clubs; on Board of,—Workers for the Blind; the Red Cross, the Y. W. C. A.; the Camp Fire Girls; Presidents of P.-T. A.'s and of Clubs; the Social Service Council of Atlanta and adjacent counties.

### DISTRICTS

Districts 1, 3, 5, 6, 8, 9, 10 now have adopted and bought the uniform scrap books in blue buckram with seal and lettering in gold.

*Note:* Have you sent press notices to your district and state scrapbook chairmen?

Each local president who has not had her Mother Welfare Program for her Auxiliary is urged to plan it at once; also one on "Animals Contribution to Relief of Suffering."

### COUNTIES REPORTING FOR 1934

#### *Troup County Medical Society*

The Troup County Medical Society announces the following officers for 1934:

President—Rance O'Neal, West Point.  
Vice-President—C. W. Harvey, Hogansville.  
Secretary-Treasurer—M. M. Byrd, West Point.  
Delegate—E. C. Herman, LaGrange.  
Alternate Delegate—R. S. O'Neal, LaGrange.  
Censor—Hugh McCulloh, West Point.

#### *Washington County Medical Society*

The Washington County Medical Society announces the following officers for 1934:

President—W. M. Cason, Sandersville.  
Vice-President—Steve B. Malone, Sandersville.  
Secretary-Treasurer—O. D. Lennard, Tennille.  
Delegate—N. J. Newsom, Sandersville.  
Alternate Delegate—Ralph L. Taylor, Davisboro.

#### *Macon Medical Society (Bibb County)*

The Macon Medical Society announces the following officers for 1934:

President—A. R. Rozar, Macon.  
Vice-President—C. Hall Farmer, Macon.  
Secretary-Treasurer—Leon D. Porch, Macon.  
Delegate—Chas. C. Harrold, Macon.



Alternate Delegate—Jno. I. Hall, Macon.

Delegate—J. D. Applewhite, Macon.

Alternate Delegate—Jas. B. Kay, Byron.

Censors—O. H. Weaver, J. D. Applewhite and Chas. C. Hinton.

*Georgia Medical Society (Chatham County)*

The Georgia Medical Society announces the following officers for 1934:

President—H. L. Levington, Savannah.

President-Elect—M. J. Egan, Savannah.

Vice-President—M. J. Epting, Savannah.

Secretary-Treasurer—O. W. Schwalb, Savannah.

Delegate—G. H. Lang, Savannah.

Delegate—R. V. Martin, Savannah.

*Floyd County Medical Society*

The Floyd County Medical Society announces the following officers for 1934:

President—B. V. Elmore, Rome.

Vice-President—R. M. Harbin, Rome.

Secretary-Treasurer—J. H. Mull, Rome.

Delegate—W. P. Harbin, Jr., Rome.

*Jefferson County Medical Society*

The Jefferson County Medical Society announces the following officers for 1934:

President—L. R. Bryson, Louisville.

Vice-President—S. C. Ketchin, Louisville.

Secretary-Treasurer—S. T. R. Revell, Louisville.

Delegate—S. T. R. Revell, Louisville.

*Jackson-Barrow Counties Medical Society*

The Jackson-Barrow Counties Medical Society announces the following officers for 1934:

President—S. T. Ross, Winder.

Vice-President—L. C. Allen, Hoschton.

Secretary-Treasurer—J. C. Bennett, Jefferson.

*Thomas County Medical Society*

The Thomas County Medical Society announces the following officers for 1934:

President—J. J. Collins, Thomasville.

Vice-President—S. E. Sanchez, Barwick.

Secretary-Treasurer—H. M. Moore, Thomasville.

Dr. C. H. Ferguson, Thomasville, was re-elected to the Board of Censors.

*Bartow County Medical Society*

The Bartow County Medical Society announces the following officers for 1934:

President—R. E. Adair, Cartersville.

Vice-President—W. C. Wofford, Cartersville.

Secretary-Treasurer—J. W. Stanford, Cartersville.

Delegate—T. Lowry, Cartersville.

Alternate Delegate—J. W. Stanford, Cartersville.

*Tri County Medical Society*

The Tri County Medical Society announces the following officers for 1934:

President—J. L. Cheshire, Damascus.

Vice-President—J. G. Standifer, Blakely.

Secretary-Treasurer—C. K. Sharp, Arlington.

Delegate—J. G. Standifer, Blakely.

Alternate Delegate—C. K. Sharp, Arlington.

*Bulloch-Candler-Evans Counties Medical Society*

The Bulloch-Candler-Evans Counties Medical Society announces the following officers for 1934:

President—J. Wallace Daniel, Claxton.

Vice-President—Waldo E. Floyd, Statesboro.

Secretary-Treasurer—Walter E. Simmons, Metter.

Delegate—A. J. Mooney, Statesboro.

Alternate Delegate—B. B. Jones, Metter.

Censors—R. L. Cone and J. M. McElveen.

*Lowndes County Medical Society*

The Lowndes County Medical Society announces the following officers for 1934:

President—J. P. Prescott, Lake Park.

Vice-President—S. B. Ellis, Valdosta.

Secretary-Treasurer—T. C. Williams, Valdosta.

Delegate—H. M. Tolleson, Hahira.

Alternate Delegate—G. T. Crozier, Valdosta.

Censors—E. F. Thompson, A. M. Johnson and E. J. Smith.

*Fulton County Medical Society*

The Fulton County Medical Society announces the following officers for 1934:

President—Marion C. Pruitt, Atlanta.

President-Elect—E. D. Shanks, Atlanta.

Vice-President—Mark S. Dougherty, Atlanta.

Secretary-Treasurer—M. T. Harrison, Atlanta.

Dr. Ben H. Clifton, Atlanta, was elected to the Board of Trustees.

*Walker County Medical Society*

The Walker County Medical Society announces the following officers for 1934:

President—J. S. Alsobrook, Rossville.

Vice-President—Fred H. Simonton, Chickamauga.

Secretary-Treasurer—O. B. Murray, LaFayette.

Delegate—A. H. Hinton, Rossville.

Alternate Delegate—Fred H. Simonton, Chickamauga.

*Muscogee County Medical Society*

The Muscogee County Medical Society announces the following officers for 1934:

President—W. F. Jenkins, Columbus.

Vice-President—C. A. Peacock, Columbus.

Secretary-Treasurer—Arthur N. Berry, Columbus.

Delegate—W. P. Jordan, Columbus.

Alternate Delegate—F. B. Blackmar, Columbus.

*Clarke County Medical Society*

The Clarke County Medical Society announces the following officers for 1934:

President—G. O. Wheelchel, Athens.

Vice-President—M. A. Hubert, Athens.

Secretary-Treasurer—H. B. Harris, Athens.

Delegate—Paul L. Holliday, Athens.

Alternate Delegate—J. W. Davis, Athens.

*Hall County Medical Society*

The Hall County Medical Society announces the following officers for 1934:

President—L. W. Hodges, Gainesville.



Vice-President—W. K. Phillips, Cleveland.  
 Secretary-Treasurer—W. R. Garner, Gainesville.

#### *Terrell County Medical Society*

The Terrell County Medical Society announces the following officers for 1934:

President—Guy Chappell, Dawson.  
 Vice-President—R. R. Holt, Parrott.  
 Secretary-Treasurer—Steve P. Kenyon, Dawson.  
 Delegate—W. P. Durham, Sasser.  
 Censor—Lucius Lamar, Dawson.

#### *Jenkins County Medical Society*

The Jenkins County Medical Society announces the following officers for 1934:

President—M. E. Perkins, Millen.  
 Vice-President—H. G. Lee, Millen.  
 Secretary-Treasurer—C. Thompson, Millen.  
 Delegate—C. Thompson, Millen.  
 Alternate Delegate—G. G. Lunsford, Millen.

#### *Talbot County Medical Society*

The Talbot County Medical Society announces the following officers for 1934:

President—J. E. Peeler, Woodland.  
 Secretary-Treasurer—W. P. Leonard, Talbotton.

#### *Telfair County Medical Society*

The Telfair County Medical Society announces the following officers for 1934:

President—C. R. Youmans, Lumber City.  
 Vice-President—J. K. Fussell, Rhine.  
 Secretary-Treasurer—J. W. Neal, Scotland.  
 Delegate—C. J. Maloy, Helena.  
 Alternate Delegate—D. W. F. Maloy, Milan.

#### *Spalding County Medical Society*

The Spalding County Medical Society announces the following officers for 1934:

President—H. J. Copeland, Griffin.  
 Vice-President—W. H. Austin, Griffin.  
 Secretary-Treasurer—W. C. Miles, Griffin.  
 Delegate—M. M. Head, Zebulon.  
 Alternate Delegate—H. J. Copeland, Griffin.  
 Censors—A. H. Frye, H. W. Copeland and I. B. Howard.

#### *Emanuel County Medical Society*

The Emanuel County Medical Society announces the following officers for 1934:

President—J. H. Chandler, Swainsboro.  
 Vice-President—V. E. Franklin, Graymont.  
 Secretary-Treasurer—R. C. Franklin, Swainsboro.  
 Delegate—W. H. Lucas, Stillmore.  
 Alternate Delegate—R. C. Franklin, Swainsboro.  
 Censors—D. D. Smith, R. C. Franklin and S. S. Youmans.

#### *Macon County Medical Society*

The Macon County Medical Society announces the following officers for 1934:

President—D. B. Frederick, Marshallville.  
 Secretary-Treasurer—Thos. M. Adams, Montezuma.

Delegate—H. C. Derrick, Oglethorpe  
 Alternate Delegate—D. B. Frederick, Marshallville.

#### NEWS ITEMS

Dr. Wm. A. Palmour, Gainesville, was recently elected City Commissioner without opposition. He will serve for three years beginning January 1st.

The Thomas County Medical Society met at the Archbold Memorial Hospital, Thomasville, on December 15th. The scientific program consisted of the following titles of papers: *Chronic Condition of Lungs* by Dr. C. H. Ferguson, Thomasville; illustrated by Dr. J. J. Collins, Thomasville, and discussed by Dr. E. F. Wahl, Thomasville. *Primary Lung Cancer*, Dr. J. C. Davis, Quincy, Fla. *Medical Treatment with the Clarks Hyperpyrexator*, Dr. Hal M. Davison and Dr. Mason I. Lowance, Atlanta; discussed by Dr. Mary J. Erickson, Thomasville. After a discussion of methods to care for charity patients, officers were elected for 1934. Dinner was served to the doctors and their wives at the hospital by the dietitian Miss Lundy. The society presented her with a "set of service plates" in appreciation of her kindness and efficiency. In addition to the members of the society and their wives, many doctors from adjacent counties, Albany, Atlanta, and Florida were present. Regular meetings of the society will be held on the third Wednesdays of April, July, October and December. The society plans to feature the Annual Meeting in December each year and make it so attractive and entertaining as to encourage all the physicians of that section of the state to attend.

Dr. Lawson Thornton and Dr. Calvin Sandison announce their association in the practice of orthopedic and plastic surgery with offices in the Doctors' Building, 478 Peachtree Street, N.E., Atlanta.

The New York Polyclinic Medical School and Hospital, New York City, announces the opening of its Physical Therapy Department on December 11th. Many prominent physicians and surgeons with other guests were present. The department is located in the new clinic building of the Polyclinic Hospital, and is under the supervision of Dr. Richard Kovacs.

The Randolph County Medical Society met at the Woman's Club Room, Cuthbert, on January 4th. Dr. J. A. Redfearn, Albany, spoke on *Heart Disease and Electrocardiography*.

Dr. R. L. Rogers, Gainesville, and Dr. Homer Langford, Clermont, entertained the members of the Hall County Medical Society to dinner at the society's December meeting. Officers were elected for 1934.

Dr. W. W. Young, Atlanta, spoke on the *Fundamentals in the Prevention of Major Social Evils* at the Psychological Laboratory Department in the Academic building of the University of Georgia at Athens on December 6th.

Dr. L. P. Longino, Milledgeville, was elected medical director and Dr. J. I. Garrard, Milledgeville, superintendent, of the Milledgeville State Hospital.

The Henry County Medical Society met at the office of Dr. R. L. Tye, McDonough, on December 14th. Dr. Tye was host at a dinner served at Ingram's Cafe.

Mr. and Mrs. O. L. Rogers, Sandersville, entertained the members of the Washington County Medical Society at their home on December 16th.

The Troup County Medical Society met at the Colonial Hotel, West Point, on December 14th. Dr. J. R. McCord, Atlanta, spoke on *Infant Mortality*; Dr. John Funke, Atlanta, discussed *Maternal Mortality and Infant Deaths*. Officers were elected for 1934.

The staff of the Ware County Hospital, Waycross, elected the following officers for 1934: Dr. C. A. Witmer, President; Dr. Kenneth McCullough, Vice-President; Dr. W. L. Pomeroy, Secretary; Dr. D. M. Bradley, Dr. W. D. Mixson, Dr. W. F. Reavis, Dr. R. L. Johnson, and Dr. C. M. Stephens, Executive Committee.

Dr. Frank K. Boland, Atlanta, was elected President of the Southern Surgical Association at the close of its meeting at Hot Springs, Va., on December 14th.

The Cobb County Medical Society met at the Marietta Hospital on December 13th. The society will be merged with the Douglas County Medical Society. Officers were elected for 1934. After the business session, dinner was served in the dining room of the hospital.

At the December meeting of the Tri-County Medical Society, Dr. W. C. Hays, Colquitt, read a paper entitled *Obstetrical Responsibilities*. It was discussed by Dr. J. G. Standifer, Blakely; Dr. J. S. Beard, Edison; Dr. J. L. Cheshire, Damascus, and Dr. C. K. Sharp, Arlington.

Dr. Guy Chappell and Dr. S. P. Kenyon, Dawson, entertained the members of the Terrell County Medical Society to dinner at McGraw's Cafe on December 18th.

The Georgia Medical Society, Savannah, met on January 9th. Dr. J. K. Quattlebaum read a paper entitled *Purpura Hemorrhagica*; discussion was led by Dr. Lee Howard and Dr. E. J. Whelan. *Nursing Relief Under the CWA*, was discussed by Dr. H. J. Morrison.

Dr. J. R. Dykes, Cairo, has been re-elected Grady County Commissioner of Health.

The Telfair County Medical Society met at McRae on December 12th. After a general discussion of the Federal Emergency Relief Administration and the CWA, officers were elected for the ensuing year. The physicians of Telfair and Jeff Davis counties were

guests of the doctors of McRae at a bird dinner served at the Royal Cafe.

The Fulton County Medical Society held its twenty-ninth anniversary meeting at the Atlanta Athletic Club on January 4th. The program consisted of Installation of Officers for 1934; Introduction of Incoming President by Dr. C. W. Strickler; Inaugural Address of the President, Dr. Marion C. Pruitt; Miscellaneous Business; Report of the Committee on the L. C. Fischer Prizes by Dr. Allen H. Bunce, Chairman; "Visual Hallucinations" by Lindey Hopkins, Jr.; after dinner speakers were: Dr. C. W. Roberts and Dr. G. W. Quillian. Dinner was served and music furnished by Graham Jackson and orchestra. Dr. Allen H. Bunce, Chairman of the Committee on the Dr. L. C. Fischer Awards for the year 1933, announced the awards as follows: For best Original Research, *Electrocardiographic Studies of the Dying Human Heart*, by Dr. J. Fletcher Hanson, Dr. W. K. Purks and Dr. Ruskin G. Anderson. Honorable mention, *Preconceptional and Prenatal Influences Affecting the Newborn*, by Dr. Lee Bivings; *A Hereditary Arthrodysplasia Associated with Hereditary Dystrophy of the Nails*, Dr. John W. Turner. For The Best Written Paper, *Congenital Heart Block*, by Dr. L. Minor Blackford and Dr. Henry M. McGehee. Honorable mention, *Amebiasis*, by Dr. Mark S. Dougherty, Jr. Dr. L. C. Fischer has offered prizes for a number of years to the members of the society to stimulate original and research work. All competitors must read their papers before the Fulton County Medical Society before being submitted for consideration in the contest.

The staff meeting of the Wesley Memorial Hospital, Emory University, was held on January 12th. Dr. Stewart R. Roberts and Dr. M. K. Bailey, Atlanta, discussed *Hypertension with Hypertensive Heart Disease, Cardiac Hypertrophy and Dilatation, Arteriosclerosis, Carcinoma of Prostate, Benign Hypertrophy of Prostate and Terminal Bilateral Broncho-pneumonia*. Dr. G. A. Duncan, Decatur, *Cerebral Thrombosis and Cancer of Tongue with Secondary Metastasis to Neck*. Dr. C. W. Strickler, Atlanta, *Mercury Poisoning*.

The staff meeting of the Crawford W. Long Memorial Hospital, Atlanta, was held on January 11th. Dr. L. C. Fischer led the discussion on *Postoperative Complications and Treatment*. Officers were elected for 1934, as follows: Dr. Harold P. McDonald, President; Dr. M. T. Harrison, Vice-President; Dr. C. E. Lawrence, Secretary.

Dr. W. L. Gilbert, Atlanta, has been elected Fulton County Commissioner of Health to succeed Dr. W. N. Adkins, deceased.

The Bibb County Medical Society held its regular meeting on January 2nd. Dr. J. W. Larimore, St. Louis, Mo., illustrated a lecture on *Gastrointestinal Diseases*.



Dr. J. H. Jackson, Barnesville, has been elected Commissioner of Health of Lamar county.

Dr. H. F. Bent has again been elected Mayor of Midville. He formerly served as Mayor eight consecutive terms.

Dr. Raymond Saurez and Dr. Evelyn Swilling, formerly on the staff of the Milledgeville State Hospital, will be associated in the practice of medicine in Macon with offices in the Georgia Casualty Building. (In private life Dr. Swilling is Mrs. Raymond Saurez).

Dr. T. I. Willingham, Atlanta, conducted a pre-school clinic for young children at the College Street School, Hapeville, January 9th.

The Fulton County Medical Society met on January 18th. Dr. J. H. Kite, Decatur, reported a case of *Unusual Osteomyelitis of the Femur*; Dr. T. S. Burgess, Atlanta, reported a case of *Acute Lung Abscess in Child Depending Upon Sinus Infection*; Dr. Howard Bucknell, Atlanta, reported cases of *Unusual Diphtheria*; Dr. Jas. N. Brawner, Atlanta, read a paper entitled *Cerebral Inhibitory Functions and Their Disorders as Related to Mental Symptoms*. Discussions were led by Dr. Lewis M. Gaines, Dr. C. W. Strickler and Dr. W. W. Young, all of Atlanta.

Dr. H. L. Tippins, formerly of Savannah and Baxley, announces the opening of an office in the Bank of Statesboro Building, Statesboro, for the practice of pediatrics and general medicine.

Dr. C. B. Upshaw, Atlanta, has been elected President of the staff of the Piedmont Hospital; Dr. Hugh M. Lokey, Atlanta, Vice-President; Dr. Wm. H. Trimble, Atlanta, re-elected Secretary.

Dr. J. M. Smith, Valdosta, has been elected Chairman of the Board of Directors of the First National Bank of Valdosta.

Dr. Walker L. Curtis, Sparks, entertained the members of the Lowndes County Medical Society to dinner at the Daniel Ashley Hotel on January 9th. Mrs. T. H. McKey, Lowndes County Civil Works Administrator, spoke on the *Importance of Medical Aid Relief Funds*. The members complimented Mrs. McKey for her good judgment in directing the affairs of the administration and for her excellent co-operation. The society accepted the invitation of Dr. J. F. Mixson to meet as his guest in February.

Dr. M. E. Winchester, Director of County Health Work in the Department of Public Health, has accepted the position of Glynn County Commissioner of Health. The staff of the State Board of Health honored Dr. Winchester at a dinner at the Piedmont Hotel, Atlanta, on January 10th. Glynn county has the distinction of being the first county in Georgia to organize a health department and the second in the United States.

## SOME NOTES ON THE WASSERMANN TEST

(Continued from Page 29)

We meet occasionally with the so-called Wassermann-fast cases. It seems that in some instances the Wassermann will remain consistently positive after long continued treatment. There is some controversy as to whether these are specific or pseudo-reactions. Change in type of treatment in such cases is often effective.

A fractional per cent of all specimens examined yield anticomplementary reaction, even though freshly drawn. This simply means that there is present in the blood stream at that time substances which have the peculiar property of masking the true reaction by combining with the complement. In the majority of such cases these substances disappear from the blood stream within a few days. It should be noted that they will gradually develop as specimens age at room temperature.

The precipitation tests such as the Kahn for example, are quite valuable in conjunction with the routine Wassermann and especially so in the Wassermann-fast and persistent anticomplementary reactions.

The physician should submit at least 1 c.c. of blood or 2 c.c. of spinal fluid in a sterile container for the Wassermann test. Larger quantities are preferable on account of facilitating the work and enabling the laboratory to repeat the test, if such for any reason should become necessary. Occasionally specimens have to be rejected on account of insufficient quantity.

Quite often, especially during the summer months, specimens are received hemolyzed to such an extent they are deemed unsatisfactory for the Wassermann test. This condition is usually caused by prolonged warm temperature or undue mechanical agitation in transit. Specimens drawn with wet syringe and introduced in moist containers will show marked hemolysis immediately. Sometimes blood drawn shortly after the patient's meal contains sufficient chyle to render it unfit for examination.

Keidel tubes are very satisfactory for obtaining and submitting specimens of blood not only for the Wassermann test, but also for other examinations in which liquid blood is required. Specimens should be kept cool until started on their journey to the laboratory, which they should reach, preferably within 24 hours and not later than 48 hours after being drawn. We cannot overemphasize the importance of enclosing in the same package with the specimen the information pertaining to it.





DR. GEORGE YOUNG MOORE  
President, 1930-1931

#### OBITUARY

*Dr. George Young Moore*, Cuthbert; member; University of Georgia Medical Department, Augusta, 1888; aged 65; died of heart disease at his home on December 24, 1933. He was born in Laurens, S. C. After he graduated in medicine, he began practice in South Carolina, then moved to Elberton where he practiced for a few years; thence in 1898 to Cuthbert where he spent the remainder of his life. Dr. Moore was a charter member of the Randolph County Medical Society. Served the society as Censor, then President, and elected Secretary-Treasurer for life. He was appointed Vice-Councilor for the Third District in 1924, elected Councilor in 1927, and President-Elect of the Medical Association of Georgia in 1929, served as President in 1930-31. Through his efforts the Randolph County Medical Society for many years headed the honor roll of all societies in the state. In December he reported 100 per cent paid up membership for 1934 and again the society was number one on the honor roll for this year. Dr. Moore, while Councilor, had the unique distinction of placing the Third District on the honor roll. He took an active interest in civic, political and religious affairs not only in his home town and county but in the state and nation. The best interests of the people were always uppermost in his mind and espoused to

the extent of his energy and ability. Dr. Moore was affable and courteous to every one, generous and liberal in his views, consistent and charitable in all his dealings, loyal to every duty and trust, content only to make the best of every condition. The Randolph County Medical Society, the Medical Association of Georgia and the Cuthbert Baptist church have lost a loyal member, an efficient and faithful guide, and the state one of its best citizens. Surviving him are his widow and one brother, Lon Moore. Funeral services were conducted from the home by Rev. M. L. Lawson and Rev. W. M. Haywood. Burial was in the city cemetery at Elberton.

*Dr. N. Charles Alston*, Richland; member; Atlanta School of Medicine, Atlanta; aged 78; died at his home on December 31, 1933. He was one of the pioneer citizens of Richland and Stewart county. Dr. Alston was engaged in farming, pecan and fruit growing, and retired from the active practice of medicine and surgery a few years ago. He was successful in his undertakings and was one of the largest shippers of pecans in southwest Georgia. In later years much of his work was entrusted to others and he traveled extensively. Dr. Alston was public-spirited and promoted many of the progressive undertakings of his home community. He was a member of the Stewart-Webster Counties Medical Society and the Methodist church. Surviving him are his widow, one daughter, Mrs. Z. L. Coffin; one son, G. S. Alston. Funeral services were conducted from the residence by Rev. L. M. Spivey. Interment was in the Harmony cemetery.

*Dr. Elliott L. Baker, Jr.*, Columbus; member; University of Georgia Medical Department, Augusta, 1931; aged 33; died at a private hospital in Atlanta after a brief illness on December 4, 1933. He was born and reared in Columbus, was an honor graduate at the University of Georgia Medical Department, served as an interne at the Georgia Baptist Hospital, Atlanta, and later as house physician. Before his death he was associated with his father, Dr. E. L. Baker, Sr., Columbus, in the private practice of medicine. Dr. Baker was a member of the Fulton County Medical Society, F. & A. M., and the St. Paul's Methodist church of Columbus. Surviving him are his widow, one daughter, little Mary Annelle Baker; his father, Dr. E. L. Baker, Columbus; one sister, Miss Louise Baker, Columbus. Funeral services were conducted by Dr. Louie D. Newton from Spring Hill Chapel, Atlanta. Burial was in West View Cemetery, Atlanta.

*Dr. George L. Harman*, Savannah; Baltimore University School of Medicine, Baltimore, Md., 1897; died at his home of heart disease on December 2, 1933. He was a native of North Carolina. After graduating in medicine, he moved to Savannah and began the private practice of medicine. Dr. Harman had served as alderman of Savannah and as superintendent of the Warren A. Candler Hospital. He was widely

known in Savannah and held in high esteem by many warm personal friends. Surviving him are his widow, one son, Geo. L. Harman; one daughter, Mrs. Lionel M. Barger. Funeral services were conducted from the residence by Rev. Jno. S. Wilder and interment was in Bonaventure cemetery. Services and burial were private.

*Dr. James Henry McClure*, Cornelia; member; University of Tennessee College of Medicine, Memphis, 1892; aged 69; died of heart disease at his home on December 7, 1933. He received his literary education at Dabney and Vanderbilt University. Dr. McClure began the practice of medicine at Waycross, later moved to Gainesville, thence to Cornelia. He had taken post-graduate work in Chicago and New York. Dr. McClure had an extensive practice in Habersham and adjoining counties and was held in high esteem by his acquaintances. He served as captain in the medical corps of the United States Army during the World war. He was a member of the Habersham County Medical Society and the Cornelia Methodist church where he served as a steward for many years. Surviving him are his widow; three sisters, Mrs. R. C. Roberts, Jefferson; Mrs. W. L. Richardson, Gainesville; and Mrs. Charles Palmer, Chelsea, Okla.; one brother, Robert D. McClure, Brady, Texas. Funeral services were conducted from the Cornelia Methodist church. Burial was in Greenlawn cemetery, Gainesville.

*Dr. Thomas Byron Kea*, Adrian; member; Emory University School of Medicine, Emory University, 1915; aged 54; died of heart disease at his home on December 5, 1933. He was born and reared in Emanuel county and received his early literary training in the high schools of the county. Dr. Kea practiced medicine in Adrian and the surrounding community from the time he received his degree in medicine. He was a descendant of one of the pioneer families of Emanuel county. The hearts of many people were saddened at the report of his death. He was public-spirited in every way, charitable and maintained the high traits of character established in the community more than a century and a half ago by his forefathers. He was a member of the Kea church, established by his great-grandfather 156 years ago. Surviving him are his widow and a stepdaughter, Leahdora McWaters. Funeral services were conducted by Rev. J. E. Barnwell, Arlington, and Rev. O. C. Cooper, Adrian, from the Kea church. Burial was in the churchyard.

*Dr. Benjamin F. Bond*, Savannah; Atlanta College of Physicians and Surgeons, Atlanta, 1900; aged 56; died suddenly at his home on December 9, 1933. He was born and reared in Franklin county. Dr. Bond served in the medical corps of the United States Army during the World war, and continued in government service afterwards. He was stationed at the United States Marine Hospital, Savannah, for twelve years before being retired on account of ill health,

last July. Dr. Bond for one term represented Franklin county in the General Assembly of Georgia. Surviving him are one daughter, Ximenam; five sons, S. P., Benj., and Will, of Savannah; Claude of Atlanta; and Charley of College Park. Funeral services were conducted from the Universalist church at Canon of which he was a member. Burial was in the churchyard.

*Dr. Carlos Brown Meadows*, Valdosta; member; University of Georgia Medical Department, Augusta, 1899; aged 61; died enroute home from a hunting trip on December 8, 1933. He was a prominent physician and known by many people of Lowndes and adjoining counties. Dr. Meadows took an active interest in civic and religious affairs. He was kind and charitable in all of his dealings. Dr. Meadows was a member of the Lowndes County Medical Society, American Medical Association and the First Methodist church. Surviving him are his widow; one son, John D. Meadows, Ft. Pierce, Fla.; four daughters, Mrs. Ray Saunders, Ft. Pierce, Fla.; Misses Elizabeth, Sarah Frances, and Katherine Meadows, all of Valdosta. Funeral services were conducted by Dr. Henley M. Fugate from the First Methodist church. Interment was in Sunset Hill cemetery.

*Dr. Logan Lightfoot Thomas*, Dawson; member; Georgia College Eclectic Medicine and Surgery, Atlanta, 1897; aged 68; died at his home on December 11, 1933. He was born and reared in Atlanta and first practiced medicine in Atlanta. At one time was assistant professor of anatomy in the school from which he graduated. Dr. Thomas served in the medical corps of the United States Army during the Spanish-American war and as examiner of the men drafted into service during the World war. He wrote a number of books on political and medical subjects. Titles of some of his political writings were: *Those who Live by the Sword, by the Sword Shall They Perish* and *Political Death Traps in Europe*. His work in medicine covered a variety of subjects. A collection of curios had been gathered by Dr. Thomas while traveling, which added to the interest of his home, said to be the most attractive in Terrell county. Dr. Thomas was generous in rendering medical service to the indigent and was never known to deny any one on account of poverty. He was public-spirited and took an active interest in civic, political and religious affairs. Dr. Thomas was a member of the Terrell County Medical Society, F. & A. M., Shrine, and the Dawson Methodist church. Surviving him are his widow; one daughter, Mrs. Fred Gay, Cuthbert; one son, Logan Thomas, Atlanta. Funeral services were conducted from the home by Rev. J. M. Glenn. Burial was in the city cemetery at Cuthbert.

*Dr. Emmaus M. Jennings*, Menlo; member; Chattanooga Medical College, Chattanooga, Tenn., 1900; aged 64. He was a prominent physician and held in high esteem by hundreds of acquaintances. Dr. Jennings had an extensive practice. He had been a mem-



ber of the Chattooga County Medical Society for more than twenty years.

*Dr. Robert Benjamin Chastain*, Calhoun; Emory University School of Medicine, Atlanta, 1920; aged 39; died at the home of his mother in Calhoun on December 14, 1933. He had practiced medicine in Valley Head and Huntsville, Alabama, and being forced to retire on account of his health, he resided with his mother. Dr. Chastain was a member of the Methodist church. Surviving him are his mother and one sister, Miss Mabel Chastain, Calhoun. Funeral services were conducted from the home by Rev. R. C. Cleckler. Burial was in the Fain cemetery.

*Dr. Jefferson Davis Wilcox*, Willacoochee; Southern Medical College, Atlanta, 1882; aged 77; died at his home of heart disease on December 21, 1933. He graduated in medicine in a class of thirty-seven with second honor, and was the first native of Coffee county to receive a degree in medicine. Dr. Wilcox was one time mayor of his home town, represented his county and district in the upper and lower branches of the General Assembly of Georgia. He was a Spanish-American war veteran and was decorated in 1932 by both the Cuban and United States governments for services rendered in the war. Surviving him are two sons, Ira E. Wilcox, Birmingham, Ala., and Congressman J. Mark Wilcox, West Palm Beach, Fla.

*Dr. Henry A. Vann*, Boston; member; New York University Medical College, New York City, 1871; aged 83; died suddenly of apoplexy at his home on April 18, 1933. He was born and reared in Thomas county. Dr. Vann began the practice of medicine in the country near Boston, later moved to Boston where he spent the balance of his life. He was the oldest practicing physician in Thomas county and had been an active member of the Thomas County Medical Society and the Association for many years. A few years ago he was elected to honorary membership in the society and the association for his long, useful and unselfish practice. Dr. Vann was honored by all who knew him for there was nothing but kindness known in the acts of his life. But few men attain such a degree of usefulness and merit such generous and wholesome admiration. Surviving him are two daughters, Mrs. Ed Cook, Boston; Mrs. John Ingram, Boston; three sons, H. A., Lynn Haven, Fla.; A. T., Washington, D. C.; and E. J., Eton, Ga. Funeral services were conducted from his home and burial was in the Boston cemetery.

*Dr. Frank W. Parks*, Brinson; member; Georgia College Eclectic Medicine and Surgery, Atlanta, 1912; aged 50; died of acute indigestion and heart disease at his home on December 16, 1933. He was born and reared in Hart county. After graduating in medicine, he practiced at Bowman for a few years, then moved to Brinson. Dr. Parks through his ability and kindness acquired many friends and an excellent practice.

He was public-spirited and active in the affairs of his community and county. Surviving him are his widow and one sister, Mrs. Henry Herring, Lavonia.

*Dr. William Weaver Stewart*, Columbus; Bellevue Hospital Medical College, New York City, 1890; aged 68; died at his home on December 24, 1933. He was a native of Columbus and had practiced medicine there since 1891. Dr. Stewart was a well known, popular physician. For many years he was associated in the practice of medicine with the late Dr. George Grimes. Surviving him are his widow and two sons, Edward Stewart, Columbus, and Myles Stewart, San Antonio, Texas. Funeral services were conducted from the Trinity Episcopal church by Rev. G. C. Hinshelwood. The members of the Muscogee County Medical Society formed an honorary escort.

*Dr. Henry Alonzoe Akridge*, Brunswick; member; Emory University School of Medicine, 1915; aged 43; died of pneumonia at a private hospital in Jacksonville, Florida, on December 17, 1933. He was a native of Mitchell county and an excellent health officer. Dr. Akridge served as captain in the medical corps of the United States Army during the World War and was county commissioner of health for Glynn county for eleven years. He inaugurated modern health measures in the county and secured the interest of the people in a campaign for "perfect teeth" in the children of all grades in the common schools. Dr. Akridge conducted a successful malaria and mosquito eradication campaign. Many times he was complimented by the officers of the United States Public Health Service for the success of his work. Surviving him are his widow and one daughter, Miss Margaret Akridge. Funeral services were conducted by Rev. O. F. Cook, pastor of the First Methodist church, from the chapel of Mr. E. Miller. Burial was in the Akridge cemetery in Mitchell county.

*Dr. John Nathaniel Childs*, Ideal; member; University of Georgia Medical Department, Augusta, 1893; aged 73; died of heart disease at his home on December 29, 1934. He was a native of Macon county and had practiced medicine there for more than thirty years. He took an active interest in civic and religious affairs. Dr. Childs was a member of the Macon County Medical Society and the Methodist church. Surviving him are his widow, one daughter, Miss Elma Childs, Ideal; three sons, Earl, Millard and Sam Childs, all of Ideal. Funeral services were conducted by Rev. W. E. Dennis and Dr. J. A. Thomas. Burial was in Oglethorpe cemetery.

*Dr. William Nevin Adkins*, Atlanta; member; Atlanta College of Physicians and Surgeons, Atlanta, 1905; aged 50; died at a private hospital on January 6, 1934. He was a native of Rome, and at one time associated in health work with the health department of New York City. Was major in the medical corps of the United States army during the World War, and later on the medical staff of the United States Veterans' Hospital, Atlanta. Dr. Adkins moved to



Atlanta in 1912 and was the first Fulton County Commissioner of Health elected by the Fulton County Commissioners. His work and interest in the duties of his office have been commended by those in position to know the value of his services. Dr. Adkins was a member of the Fulton County Medical Society and the Shrine. Surviving him are his widow and two daughters, Misses Nevin and Anne Adkins. Funeral services were conducted from Spring Hill chapel by Dr. W. W. Memminger. Interment was in West View cemetery.

### BOOKS RECEIVED

*International Clinics*—A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rinology, Laryngology, Hygiene, and Other Topics of Interest. Written by leading members of the medical profession throughout the world. Edited by Louis Hamman, M.D., visiting physician, Johns Hopkins Hospital, Baltimore, Maryland. Volume IV. Forty-Third Series, 1933. Contains 317 pages. Publishers: J. B. Lippincott Company, Philadelphia, Pa.

*The Medical Clinics of North America*. (Issued serially, one number every other month.) Volume 17, No. 3. (Philadelphia Number—November, 1933) Octavo of 326 pages with 59 illustrations. Per Clinic year, July 1933 to May 1934. Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, West Washington Square, Philadelphia, Pa.

*Voluntary Motherhood*—A Discussion of the Various Contraceptive Methods, with Emphasis on Generally Approved Techniques by Antoinette F. Konikow, M.D., author of "Physicians' Manual of Birth Control." Fourth Edition, completely rewritten, 1933. Contains 36 pages. Publishers: Buchholz Publishing Company, 11 Keswick Street, Boston, Mass. Price 50 cents.

*Mystery, Magic, and Medicine*—The Rise of Medicine from Superstition to Science by Howard W. Haggard, M.D., Associate Professor of Applied Physiology, Yale University; Author of Devils, Drugs and Doctors; The Lame, the Halt, and the Blind; The Science of Health and Disease, etc. Contains 192 pages. Publishers: Doubleday, Doran & Co., Inc., Garden City, N. Y. Price \$1.00.

*Mental Hygiene in the Community*—By Clara Bassett, Consultant in Psychiatric Social Work, Division on Community Clinics, The National Committee for Mental Hygiene, Inc. Contains 394 pages. Publishers: The Macmillan Company, 60 Fifth Avenue, New York City.

The Eighty-Fifth Annual Session of the Medical Association of Georgia will meet at Augusta, May 8, 9, 10, 11, 1934.

### LECTURES AND PAPERS AT NEW YORK POLYCLINIC MEDICAL SCHOOL AND HOSPITAL

On Monday, January 8, 1934, the following program was presented at the meeting of the Clinical Society:

Diverticula of the Colon—by Jerome Morley Lynch, M.D. (Attending Proctologist to the New York Polyclinic).

Oesophageal Diverticulum: Its Diagnosis, Surgical Management and End Results—by Frank H. Lahey, M.D. (Boston), by invitation.

A Plea for the Alexander Method of Shortening the Round Ligaments for Retroversion of the Uterus—by Louis J. Ladin, M.D. (Attending Gynecologist to the New York Polyclinic).

The following lectures were given at the New York Polyclinic Medical School and Hospital:

Saturday, January 20, 1934—"The Technique of Version"—by Dr. Irving W. Potter of Buffalo (Consulting Obstetrician to the New York Polyclinic).

Wednesday, January 24, 1934—"Diabetes In Children"—by Dr. Frederick M. Allen (Attending physician to the New York Polyclinic).

### COMMUNICATIONS

#### GEORGIA RELIEF COMMISSION

To The Editor:

As everyone knows the government is spending vast sums of money to overcome the present depressed condition of our nation. There is a Georgia Relief Commission to give to the needy and relieve suffering. Numerous provisions are provided whereby medical relief can be obtained, but it seems that the present provisions are far from perfect.

I have been ordered by the county administrator of the G. R. C. to visit three patients at their homes. One of the patients has an advanced organic heart disease and so far, I have received orders to see her as often as her condition requires to give her relief. For the other two cases I cannot say this.

Case 1. On Wednesday December 29th I was consulted as to what to do for an old lady, Miss S., who had suddenly lost use of herself. She was staying with relatives three miles from Fayetteville. None in the family able to pay for aid. I explained that I could not tell her condition without seeing her, and advised that she see the county administrator of the Georgia Relief Commission here. She appealed for aid as soon as possible, the following day, and I received an order to visit her on Sunday, three days later. I immediately went to the home and found her helpless due to a paralytic stroke, cerebral hemorrhage with the usual hypertension. I have received one order to see her since this time, at which time her condition was the same.

Case 2. Mrs. M. T. T. Age 81 years. A great-grandmother of about twenty great-grandchildren. I received an order to go to the home about six miles north of Fayetteville on December 23rd. I went and found her helpless. She had fallen and I diagnosed a fractured right hip. She was unable to pay for any

aid. I immediately reported the condition to the local chairman of G. R. C. and advised that she should be seen at regular intervals, but she (the chairman) could give no more orders without an investigation. I have since received three orders to see her. Each order requiring the family or some member to ride twelve miles. Six miles to Fayetteville and six miles back home. They have traveled forty-eight miles over the country roads to obtain the four visits. I consulted the local chairman and went to the headquarters of the G. R. C. in Atlanta, to try to get her in an Atlanta hospital, to be told that there was no provisions for this service. Meanwhile the little great-grandmother, who has always been unusually active mentally and physically, has been confined to her bed. Unable to be turned to either side for the past thirteen days and needing treatment at a hospital.

It seems that in a case similar to these, the doctor should be furnished an order to see the patient as the condition of that patient requires. Further that provisions should be enacted to provide hospitalization in certain cases.

T. J. BUSEY, M.D.

Fayetteville  
January 5, 1934.

#### ARTICLES ACCEPTED

To The Editor:

In addition to the articles enumerated in our letter of November 27, 1933, the following have been accepted:

Eli Lilly & Co.

Ampoules Pentobarbital Sodium-Lilly 0.5 Gm.  
(7½ gr.)

Ampoules Sodium Amytal 0.125 Gm. (1½ gr.)  
for Intramuscular Use (Lilly)

Pulvules Sodium Amytal 1 Grain (Lilly)

National Drug Co.

Antimeningococcic Serum, two 15 cc. double and  
ampoule vials packages.

Antimeningococcic Serum, one 15 cc. cylinder  
package.

Antimeningococcic Serum, one 30 cc. double end  
vial package.

Diphtheria Toxoid, twenty 1 cc. vials package  
(ten immunization treatments)

Rabies Vaccine-Human (Semple Method), four  
2 cc. syringes and ten 2 cc. syringes packages.

Typhoid-Paratyphoid Combined Vaccine, 30 vial  
package (ten immunizations)

Typhoid-Paratyphoid Combined Vaccine, 150  
vial package (fifty immunizations)

Typhoid Vaccine, 3 vial package (one immuni-  
zation)

Schering Corporation

Neo-Iopax

Ampoule Solution Neo-Iopax, 20 cc.

Sharpe & Dohme, Inc.

Antimeningococcic Serum, 30 cc. syringe package.

Chicago, Ill.

Jan., 4, 1934.

Paul Nicholas Leech, Secretary  
Council on Pharmacy and Chemistry  
American Medical Association

#### PROMPT SETTLEMENT OF INSURANCE CLAIM\*

Mr. M. M. Stewart, Special Agent,  
State Farm Mutual Auto Insurance Co.,  
Raleigh, North Carolina.

My Dear Mr. Stewart:

At this late day I am writing you to express my appreciation of the splendid way in which you handled my automobile accident near Robersonville. It was entirely satisfactory from every standpoint.

I do not believe the people were entitled to a judgment. I trust that every doctor in North Carolina will have the same confidence in you and your company, also the same appreciation of you and your company which I have.

Your attorneys handled the claim in an entirely satisfactory manner. Will you please convey my thanks to them? I was relieved of all negotiations and trouble in making a settlement.

Very truly yours,

L. B. McBrayer, M.D.,

Secretary-Treasurer of the Medical

Society of the State of North Carolina.

Southern Pines, N. C.

November 28, 1933.

\*Dr. L. B. McBrayer, Southern Pines, N. C., Secretary-Treasurer of the Medical Society of the State of North Carolina, was involved in a serious accident in which the State Farm Mutual Auto Insurance Company paid a claim of \$7,500.00 without a contest. J. W. Morton, Jr.

#### ATABRINE IN THE TREATMENT OF MALARIA

(Continued from Page 23)

the tropics and our State Board of Health is now using it in the southwestern section of the state. Atabrine will destroy both the sexual and the asexual forms of the parasite in the tertian and quartan types of malaria in from four to five days. In estivo-autumnal malaria it will destroy the ring forms of the parasite in from three to five days but has no effect on the gametocytes. If plasmochin is added to the treatment both forms of the parasite are destroyed in five days.

The dose of atabrine is one and one-half grains three times daily for a period of five days. In the estivo-autumnal type, plasmochin should be added in doses of from one-third to one-half of a grain daily. Given in this manner I have had most gratifying results in the use of atabrine during the past



sixteen months in the treatment of fifty-nine patients with malaria.

### Conclusions

Atabrine will free the blood from both the sexual and asexual parasites in the tertian and quartan types of malaria. Used in estivo-autumnal malaria with the addition of small doses of plasmochin the blood is freed of the parasites in five days. Enlarged spleens are promptly reduced by its use.

Atabrine gives none of the subjective discomforts of quinine. People who have an idiosyncrasy for quinine take atabrine with no manifestation of allergy. The duration of treatment is much shorter than with quinine, being reduced from weeks to days.

Malarial patients who will not follow the so-called "Standard Treatment" will readily follow treatment with atabrine. While atabrine is higher in price than quinine, the short duration of the treatment makes it cheaper to use. By this treatment you not only relieve the acute symptoms of the disease but you free the patient's blood of the malarial parasites thereby preventing the perpetuation and spread of the disease.

### ROENTGEN EVIDENCE OF HEALING IN DUODENAL ULCER

Daniel M. Clark and Milton J. Geyman, Santa Barbara, Calif. (*Journal A. M. A.*, Jan. 13, 1934), discuss the compression technic, the significance of niche disappearance, the time of the disappearance of the niche, the relation of the niche to the contour of the deformity and the efficiency of various forms of treatment as they pertain to the evidence of healing in duodenal ulcer presented by the roentgenogram. From this study the authors conclude that in more than half of all cases of duodenal ulcer the roentgen ray has a definite value in determining the response of the lesion to treatment. Roentgen disappearance of a duodenal ulcer niche following treatment indicates a favorable initial response but does not mean that the ulcer is completely healed. There is a wide variation in the amount of time required for disappearance of the niche. As a general rule, duodenal ulcers heal more slowly than gastric ulcers. Contour deformities of the barium-filled bulb are not entirely dependable in the diagnosis of duodenal ulcer, and they are of little or no value in determining the response of a lesion to treatment.

### WHAT EVERY WOMAN DOESN'T KNOW— HOW TO GIVE COD LIVER OIL

What Every Woman Doesn't Know is that psychology is more important than flavoring in persuading children to take cod liver oil. Some mothers fail to realize, so great is their own distaste for cod liver

oil, that most babies will not only take the oil if properly given, but will actually enjoy it. Proof of this is seen in orphanages and pediatric hospitals where cod liver oil is administered as a food in a matter of fact manner, with the result that refusals are rarely encountered.

The mother who wrinkles her nose and "makes a face" of disgust as she measures out cod liver oil is almost certain to set the pattern for similar behavior on the part of her baby.

Most babies can be taught to take the pure oil if, as Eliot points out, the mother looks on it with favor and no unpleasant associations are attached to it. If the mother herself takes some of the oil, the child is further encouraged.

The dose of cod liver oil may be followed by orange juice, but if administered at an early age, usually no vehicle is required. The oil should not be mixed with the milk or the cereal feeding unless allowance is made for the oil which clings to the bottle or the bowl.

Mead's 10 D Cod Liver Oil is made from Mead's Newfoundland Cod Liver Oil. In cases of fat intolerance the former has an advantage since it can be given in 1/3 to 1/2 the usual cod liver oil dosage.

### BILATERAL CORONARY OCCLUSION WITH MITRAL STENOSIS: CONSIDERATION OF COMPENSATORY CIRCULATORY FACTORS IN THE HEART

Solomon R. Slater and Daniel Kornblum, Brooklyn (*Journal A. M. A.*, Jan. 6, 1934) report a case of both mitral stenosis and bilateral coronary occlusion which presented a tight mitral stenosis and an occlusion of all the main coronary arteries. The pathologic changes indicated that there had been for several years a progressive arteriosclerotic narrowing of the vessels and a series of thromboses leading finally to occlusion of the main coronary arteries, which in turn existed for a fairly long time. That actual infarctions of large areas had taken place at least twice was indicated by the localized areas of fibrosis, one at the base and the other at the apex of the heart. The absence of evidence of a recent thrombosis or a fresh infarction indicated that the heart was able to survive the insult that was the final stroke in occluding all the main coronaries. That the heart apparently was able to compensate fully in the presence of this pathologic condition was one of the most interesting features of this case. The edema disappeared, the liver receded, the patient was up and about for several days without symptoms, and he was discharged from the hospital with a diagnosis of rheumatic fever (inactive), generalized arteriosclerosis, mitral stenosis and insufficiency, coronary sclerosis, fibrosis of the myocardium and congestive failure improved. The patient walked out of the hospital in high spirits but on entering a taxicab he suddenly fell. On examination immediately afterward, he was pronounced dead. At autopsy the lesions found besides those of the heart were infarctions in the lung, chronic cholecystitis, fatty degeneration of the liver, cyst in the pituitary gland, and cerebral edema and congestion.

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# THE JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA

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## DIETARY DEFICIENCIES AS ETIOLOGICAL FACTORS IN THE PSYCHOSES AND PSYCHONEUROSES\*

JAMES N. BRAWNER, M.D.

*Atlanta*

Only during recent years has the importance of a balanced diet in maintaining the functional and anatomical integrity of the neurons of the higher psychic levels been realized. It is probable that a prolonged dietary deficiency, especially of the proteids, certain minerals or vitamins, is, next to a defective heredity, one of the most frequent contributing causative factors in nervous and mental breakdowns. Since a deficiency of some of the elements of nutrition, particularly when prolonged, is likely to be a contributing factor in many nervous disorders, it is well to describe, in some detail, the necessary food elements and the nutritional disturbances occurring when one, or several, elements are absent.

According to E. V. McCollum, an adequate diet must provide at least thirty-seven relatively simple substances, all of which are well known to chemists. It has been shown that twenty-two of these substances may be classed as amino acids, which are derived from certain types of proteids during the process of digestion and assimilation. The necessity for foods containing a variety of proteid substances is thus seen and it has been found that meat, milk, eggs and the leafy vegetables are necessary to supply the body with all varieties of the twenty-two amino acids—often called the “building stones of the body”—each one of which is essential for proper nourishment of the tissues.

McCollum also says, “It is established that an adequate diet must furnish at least eleven inorganic or mineral elements. These are

calcium, magnesium, sodium, potassium, chlorine, iodine, phosphorous, sulphur, iron, copper and manganese. This list is probably not complete. Interest now centers in the study as to whether such elements as nickel, cobalt, fluorine, zinc and perhaps, boron, play a physiological role and are indispensable elements in an adequate diet.” He further states, “There is no difference of opinion as to the existence of at least six vitamins. The evidence is all but convincing that there are four more.”

Burr and Burr have recently demonstrated that linoleinic acid is also a necessary element in a well-balanced diet. Maurer has shown that the learning ability of mice is retarded when the food has been depleted of vitamin B. Such mice learn only half as fast as those that have been fed on a normal diet. His experiments confirm the importance of vitamin B in the diet of all persons and it explains the nature of beriberi, which is also due to a deficiency in the intake of the same vitamin. Pellagra, as was first shown by Goldberger, is also another distinct deficiency disease. While some claim it to be due to a lack of vitamin G, and others that it is a proteid deficiency disease, there seems to be but little doubt that it is caused by a lack of some essential food element. In the severer cases of pellagra, as is well known, there are marked degenerative changes in certain types of neurons in different parts of the nervous system. The cortical cells are often involved and the mental symptoms manifested by the patient often correspond to the degree of anatomical involvement in the cortex of the brain.

Dr. Elas Orient has recently demonstrated that an absence of manganese in the diet of rats causes sterility, associated with degeneration of the testes. This condition, as would naturally be supposed, causes other endocrine disturbances which finally involve the ner-

\*Read before the Medical Association of Georgia, Macon, May 10, 1933.

vous system. It has been ascertained that manganese is also required by the human body, although in extremely small amounts, yet when the tissues fail to get the minimum quantity, marked physical changes take place, illustrating how dependent our physical and mental mechanisms are on a minute quantity of one element. Even copper is required by the tissues of the body in small amounts, and while its absence does not seem to affect the nervous system directly, yet it is frequently involved indirectly, as is exhibited in many cases of pernicious anemia. Iodine, too, is another mineral that is absolutely essential, not only for the health of a person, but for his very existence. While this element is required in extremely small amounts, the thyroid gland cannot function without it, and when there is a deficiency of iodine circulating in the blood, hyperthyroidism will occur, which, in practically all cases, affects the functioning of the nervous system. It is very likely that many cases of hyperthyroidism are primarily due to a prolonged iodine deficiency. The nervous symptoms manifested by these patients are so well known that it is not even necessary to mention them.

In studying the effects of a dietary deficiency on the mental health of a person, it is well to consider first the nourishment of the child's mother during gestation and lactation, as a dietary deficiency in the mother during these periods may cause permanent defects in the child, which may be mistaken for a hereditary deficiency. It has been calculated that a normal woman requires fifteen grains of calcium per day for the purpose of nourishing and repairing her body. A large per cent of women, even when not pregnant, get an insufficient amount of lime in their food and this alone may be the cause of certain types of invalidism. A pregnant woman requires at least twenty-five grains of calcium a day. It is quite probable that the majority of these women fail to get this amount. What the exact effect of a lime deficiency in the mother will have on the proper development of the unborn child is unknown, but it is certain that chemical disturbances will occur which may change the physical and mental make-up of the child later in life. It should be remembered also

that pregnant and lactating women require larger amounts of iodine, iron and phosphorus, as well as many of the other mineral elements. In addition, the proteids, fats, carbohydrates, etc., in well-balanced and ample quantities are necessary. The vitamins, which are so essential to the proper growth and nourishment of the body, should also be amply supplied to the expectant mother.

It is evident that the growing child should receive continuously, throughout the period of growth, all the necessary food elements. A prolonged deficiency of even one or two of the essential food elements in childhood may cause serious consequences later in life. While it is true that only a small per cent of the total number of food deficiency cases ever break down mentally, such persons are below par physically and are more susceptible to various diseases, especially the infections with their numerous complications, following which the brain and mind may become involved.

In studying the effects of dietary deficiencies as related to the etiology of the various nervous and mental disorders, it is often found that patients with dementia praecox take an insufficient amount of food. Frequently for months, or even years before the development of schizophrenic symptoms, they are often finicky concerning their diet and, in my experience, practically all suffer from some form of food deficiency. It is probable that persons of the dementia praecox type have a tendency to consume a smaller amount of food than has the average individual. In the first stages of this disorder, whether or not the patient receives a well-regulated and balanced diet, may be the determining factor between a sound or unsound mind later in life. The diet of the schizophrenic patient should be one that is especially rich in proteids, calcium, phosphorus, iodine and the vitamins, and when they are supplied in ample quantities, patients are more likely to adjust themselves on a fairly normal level.

The toxic psychoses, both endogenous and exogenous types, frequently occur in patients who have suffered from dietary deficiencies over a prolonged period, thus rendering an imbalance in the chemistry of the tissues of the body. In some of these cases,



no doubt an imbalanced diet is the main etiological factor, while in others it appears to be a contributing cause. Some observers have come to the conclusion that in chronic alcoholism some of the tissue changes, even those of a multiple neuritis, are principally due to the fact that alcoholics are likely to take, over prolonged periods, an imbalanced diet. The toxic psychoses which occur in middle life, and which are associated with arterio-renal diseases, are often benefited by a diet containing a large proportion of leafy vegetables in which the minerals, especially potassium, are found in ample quantities. Such patients are often benefited by the administration of potassium acetate in fifteen grain doses three times a day until the urine becomes neutral or slightly alkaline.

It is likely that many of the psychoneurotic disorders and mild nerve imbalances are aggravated, or brought to the surface, either through a deficient food intake or by the lack of specific nutritional elements. Many of these patients have a mild hypothyroidism and may be markedly improved by the administration of syrup of iodide of iron in five minim doses three times a day. A number of these patients take an insufficient amount of calcium and phosphorus. This should be supplied by an increase in the consumption of milk. Neurotic patients should also take well-balanced quantities of proteids and carbohydrates.

#### *Conclusion*

It is probable that certain constitutional defects, apparently hereditary, are, in reality, due to dietary deficiencies in the mother during gestation or lactation; or they may be caused by a prolonged deficiency in the food intake during childhood. Such disorders usually are the result of the lack of a sufficient quantity or variety of the proteids, minerals or vitamins. A few nervous and mental disorders, such as beriberi and pellagra, may be traced specifically to the lack of certain elements in the food and, judging from analogy, there are other nervous diseases yet to be determined whose origin may be traced to food deficiencies. We may be sure, however, that many of the mild nerve imbalances, neuroses and psychoses, even when the main etiological factors are pre-

dominantly infectious, toxic or psychogenic, are markedly influenced by the diet. It should be remembered also that all of the necessary food elements are found in a diet consisting of bread, meat, eggs, salt water fish, leafy vegetables, fruits and milk—the last named being one of the most important. We should remember that food elements do not grow in laboratories. While it is necessary to prescribe occasionally minute quantities of iodine, or a sufficient amount of calcium, phosphorus, copper, potassium, cod liver oil, etc., experiments show that all of the food elements are found in a properly balanced diet and seldom is it necessary to supply any of them in the form of medicines.

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#### *Discussion on Paper by Dr. Jas. N. Brawner*

DR. R. C. SWINT, Milledgeville: Mr. President and Gentlemen: I am very glad to have the pleasure of hearing Dr. Brawner's paper, and to have the opportunity to discuss it before this Association. I think the paper is written on a timely subject, because of the number of people afflicted and the information it brings the general practitioner that may be applied in his daily work. It is a remedy and method of approach that is so frequently overlooked.

We frequently get patients who are dehydrated and undernourished, and some of them respond rapidly to proper dietary treatment. Work that is being done now by studies in modern dietaries is teaching us more and more about the scientific application of diet in general diseases, as well as special diseases.

You are no doubt familiar with the work of Timme and others with reference to the endocrine glands. It is an accepted fact that hypofunctioning of the parathyroid and disorder of the functioning of the thyroid may cause definite behavior disorders that may be corrected by proper medication and diet.

We cannot speak, however, with definite authority concerning the specific relationship of the diet as an etiological factor in the major psychoses or the psychoneuroses, but we have this knowledge as to the cause of psychoses with pellagra. The work of Goldberger and Wheeler has definitely demonstrated that pellagra is caused by a dietary deficiency. The U. S. Public Health Service has been carrying on some research work at the State Hospital since 1914, and I have seen patients who were fed on a pellagra producing diet go down under this diet and develop pellagra, and when put upon a proper diet they would respond promptly. Furthermore, patients may develop pellagra if given a pellagra-producing diet, and the symptoms will promptly disappear if brewers' yeast is given in correct quantities. Every one who has pellagra does not necessarily develop a psychosis, and every one who has a psychosis and pellagra does not have a psychosis that is caused by pellagra. For

instance, you may have pellagra plus an associated psychosis, such as schizophrenia or manic-depressive psychosis. When the pellagra symptoms appear before the mental symptoms, and the mental symptoms that follow and are associated therewith are those of mental confusion, clouding of consciousness with psychosensory disorders and fears, we generally conclude that the psychosis is caused by the pellagra. These cases usually respond to dietary treatment and the administration of brewers' yeast.

I think the ideas suggested by the essayist in regard to the pregnant mother important for the obstetrician and the general practitioner to keep in mind. Also the question of diet in early childhood very important. Proper and adequate diet is essential for the building of a constitution able to meet the stresses incident to modern living. Modern psychiatry in approaching the problem of etiology of the psychoses and psychoneuroses considers the individual patient as a whole i.e., his ancestry, his personality make-up, his personal history, his physical condition, his psychological status, his whole environment and task at hand. Unless this is done something of importance will be overlooked, and the diet and nutrition is not the least of them.

DR. NEWDIGATE M. OWENSBY, Atlanta: It has been a real pleasure to listen to Dr. Brawner's interesting dissertation. The conservative way in which he has handled his subject is most commendable and, I may say, most unusual for speakers on neuropsychiatric illness. The usual speaker would probably have made the unequivocal statement that all psychoses and psychoneuroses are due to dietary deficiencies rather than to have limited them to pellagra as has been done by Dr. Brawner. The radical statements which are only too often made by the untrained observers have done an irreparable injury to the progress of neuropsychiatry and have left the practitioners of medicine hopelessly confused regarding this specialty. The enormity of the field covered by neuropsychiatry is only equaled by that of internal medicine. All will agree that it would be manifestly incorrect to state that all physical disease is due to any one cause such as diet, focal infections, endocrine imbalance, tumors or what not. It is equally as incorrect to state that all neuropsychiatric illness is due to any one specific cause such as diet, brain tumors, psychological disturbances, syphilis, or what not. Each illness has its individual etiology which can only be determined by a most thorough and painstaking examination of the specific case. I heartily concur that dietary imbalance plays a very minor role as an etiological factor in neuropsychiatric disease in view of the fact that the majority of ills that are influenced by it rightfully belong to the sphere of internal medicine.

DR. GEO. L. ECHOLS, Milledgeville: I should like to take just a couple of minutes to give you some of the facts concerning pellagra as quoted from Dr. Wheeler: "Much of the human work on pellagra

has been conducted at the Milledgeville State Hospital. Limited observations were begun by the United States Public Health Service during the latter part of 1914, and by 1916 definite information regarding the relationship of certain classes of foods to the disease was under accumulation. This work of the Public Health Service has since been further expanded and extended, and for the past several years has included studies of the relative pellagra-preventive value of the individual foods and food stuffs commonly employed in human nutrition.

"The officers and employees of the institution have followed this progress with keen interest, and have promptly taken advantage of the practical information acquired in adjusting the diet of the inmates so as to more nearly meet the requirements for the prevention and treatment of pellagra.

"In general, these changes have consisted of a gradual increase in the supply of fresh meats, milk and fresh vegetables."

In 1915, when the work was first begun, in the total population of the State Hospital of 3550 patients, there were 227 deaths from pellagra. That is, 6.2 per cent of the resident population in 1915 of the Milledgeville State Hospital died of pellagra. In 1932, in a resident population of 5577 patients, there were only 3 deaths, a death rate of one-half of one per cent.

I should like to quote further: "Putting it in another way, on the basis of the conditions which prevailed in 1915, there should have been 349 deaths from pellagra in 1932 instead of only 3. Furthermore, for 1915, the deaths from pellagra were 35 per cent of all deaths, while for 1932 they were only one per cent of all deaths.

"During the period of 1915 to 1932, the deaths from pellagra reported for the state of Georgia as a whole have been up and down, but there has been no very noticeable permanent change in the average death rate of pellagra throughout the state, as compared with our very great changes in the State Hospital.

I wish to thank Dr. Brawner very much for his paper, and wish to thank the other discussors. I wanted to give you these facts as given to me by Dr. Wheeler.

DR. JAMES N. BRAWNER, Atlanta: I naturally appreciate very much the generous and splendid discussions given by Drs. Swint, Owensby and Echols. The main point in my article that I wish to impress is the fact that practically all food elements are found in a diet consisting of eggs, meat, milk, bread, fruit, and the leafy vegetables, provided the vegetables are grown in a soil rich in the necessary mineral elements. It should also be remembered that finicky appetites are often due to other diseases, for instance, a duodenal ulcer. Such persons are frequently dietary deficiency cases, and such a deficiency may be one of the contributing factors towards a nervous breakdown.



## DIATHERMY IN THE ABORTIVE TREATMENT OF PNEUMONIA\*

R. M. HARBIN, M.D.

Rome

For obvious reasons we will not attempt a discussion of the various types of pneumonia nor the value of any type of serum, or special drug treatment except to urge the importance of making the patient comfortable, using oxygen early and giving digitalis the benefit of doubt. Aside from these suggestions there is prevalent in the minds of our staff members, as well as others, a certain degree of therapeutic nihilism. Generally speaking, all remedies of value in any acute crisis of any disease should become more valuable when used to anticipate such crisis, and this applies especially to the use of diathermy and oxygen.

The few references in medical literature as to the value of diathermy in pneumonia are probably due to the negligible results obtained in the late application of the remedy, for all initial infective processes are characterized by slight virulence as compared to what follows in a few days and any favorable remedy in the latter should show definite potency in the former class. Since induced hyperthermia, whether local or general, follows the law of a natural process in building resistance, diathermy in pneumonia should command a more serious consideration for expediting this process. Experiments on dogs indicate that the temperature of the right heart blood normally exceeds that of the left by  $0.1^{\circ}\text{F.}$  to  $0.4^{\circ}\text{F.}$ , but high frequency currents reverse this relationship which indicates that lungs are being heated and such excess heat is eliminated by the circulating blood<sup>1</sup>. Deep heating is more marked than heat externally applied. In experimental pneumonia the affected lung becomes heated in excess of the normal by  $2^{\circ}\text{F.}$  In the human lung this difference is less marked but diathermy relieves pain and accelerates the peripheral circulation.

The manner in which diathermy works

(1) Coulter "Medical Diathermy" Journal A. M. A., June 4, 1932, page 1987.

\*Read before the Medical Association of Georgia, Macon, May 12, 1933.



Figure 1

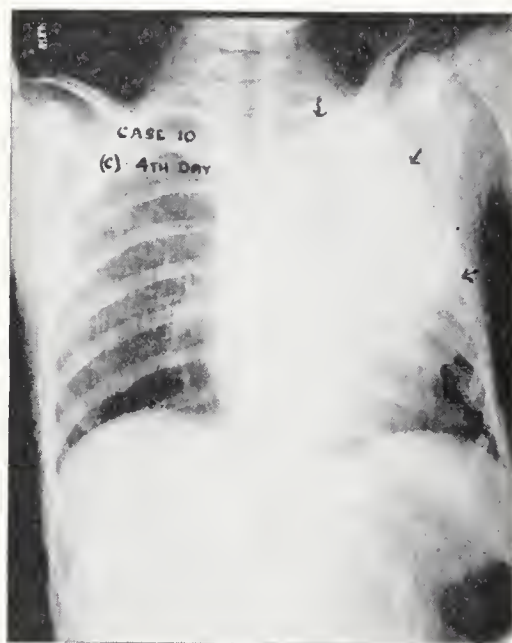


Figure 2

is not known, but from clinical observations the effects, local and general are notably favorable. For practical purposes we may assume that diathermy creates a "hot box" for building resistance in the diseased lung tissue without materially affecting the body temperature. So diathermy should be considered as a remedy of mild potency more effective in the early stages of pneumonia and only palliative in the later progress of the disease.

Pneumonia supervenes on so many pathological conditions that mild attacks may become more or less serious because of such complications and for that reason the value of any therapeutic measure cannot be prop-





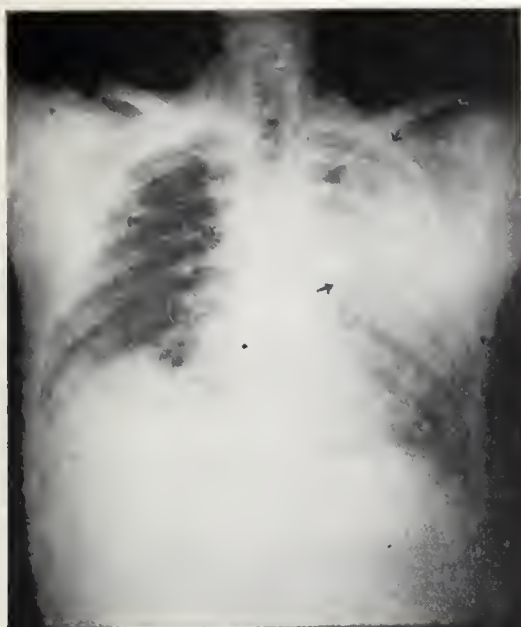


Figure 7



Figure 9

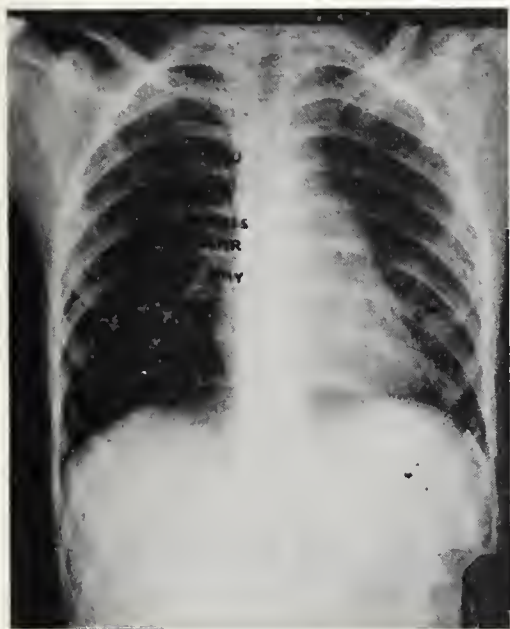


Figure 8

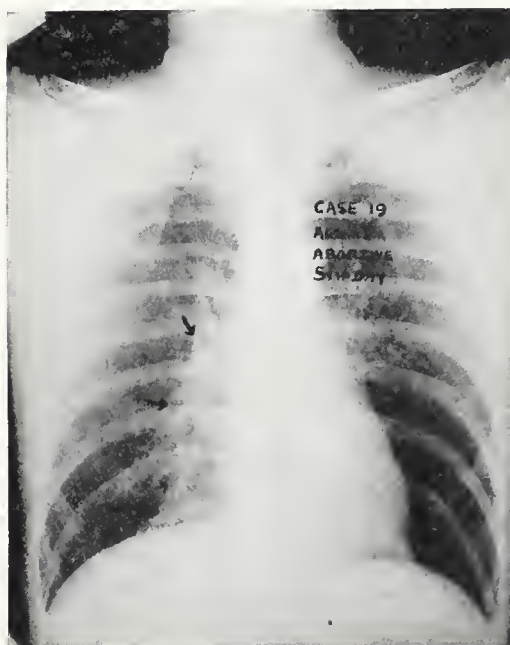


Figure 10

absence of mortality as the shorter duration of the disease (average 4.7 days) which in turn has probably contributed towards such a favorable result. There being more than coincidental significance in the shortened duration of these cases, diathermy, though a remedy of mild potency, should have a tendency to forestall the development of pneumonia in potential cases. The number of cases lasting five days or less was 12 or 60 per cent. Films on the first day do not show any less extensive pathology in abortive cases than those running a regular course. In the cases classed primarily as abortive only one (No. 11) showed recrudescence in developing into a grave case.

From a review of these films it is doubtful, in our minds, whether the early clean-cut differentiation of lobar and bronchopneumonia by physical signs or even by x-ray can be made, but such academic studies have little practical bearing on the manner of treatment.

Aside from diathermy and the early use of oxygen a few of these cases had no drug treatment whatever except an opiate for the sake of comfort and all of the physicians were committed only to the rule of making the patients comfortable with the free administration of fluids. The physicians of another generation recognized the clinical identity of abortive types of pneumonia and

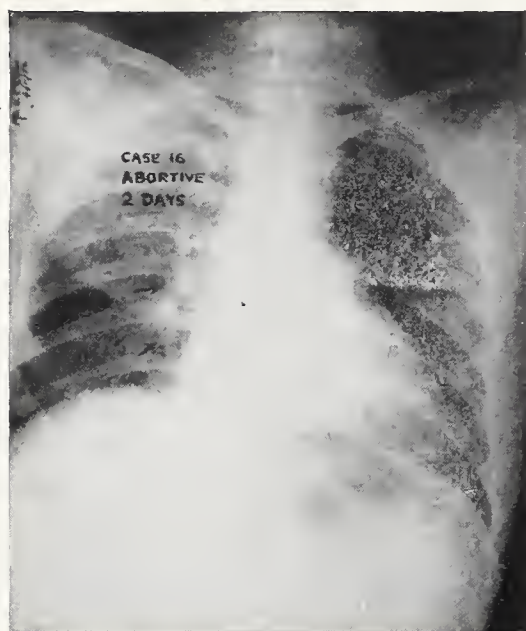


Figure 11

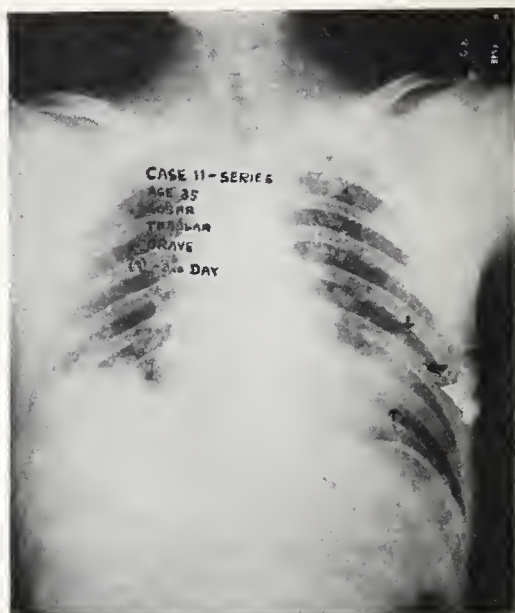


Figure 13

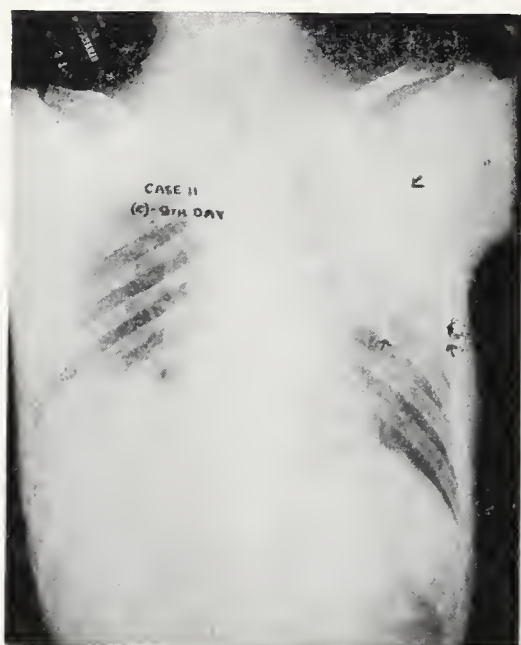


Figure 12

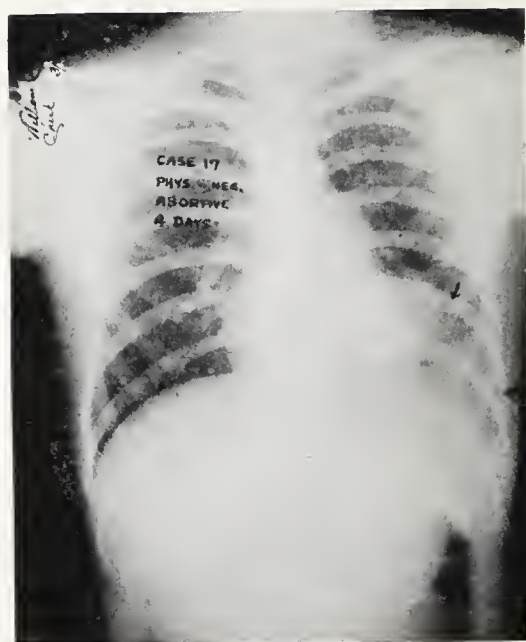


Figure 14

the x-ray has confirmed that observation but in this table of consecutive cases the incidence of this type (60 per cent) has been greater than ordinarily observed and diathermy can reasonably be construed as a determining factor. Our rule has been to apply this treatment immediately in all suspicious cases. In aged patients normal temperatures in well-developed cases of pneumonia have for a long time been considered an ill omen because of lack of resistance. From time immemorial heat has been used in some form in the treatment of pneumonia. After an active fever, the first day of normal or subnormal temperature has been arbitrarily assumed to be an index of final development

of more or less complete resistance and thus to determine the duration. Such complicated types as post-operative pneumonia seem to respond favorably to the use of diathermy probably because of an early application of the remedy.

#### Comment

1. Induced hyperthermia raises the temperature of a diseased lung to greater extent than obtains in healthy tissue.

2. Diathermy though a valuable aid to all therapeutic measures with no contra-indications shows definite potency only in the early stages of pneumonia.

3. The first x-ray films showed the same degree of pathological developments in



*Twenty consecutive uncomplicated cases of pneumonia between the ages of 10 and 60 years coming under treatment with diathermy within the first 48 hours of symptoms.*

(From case records of four staff members Harbin Hospital)

Case	Case Record	Sex	Age	Hours Before Treatment	Right, Left, Double	Max. Temp. Day	Duration	Death	Number of Treatments	X-Ray Readings.	Remarks.
1	8757	M	25	24	L	103 3-5 2	7	0	14	Density lower left lung field.	
2	9215	M	35	24	R	102 1	3	0	6	Small density right lower lung field.	
3	9229	F	19	24	D	104 2	3	0	22	Typical symptoms cyanosis.	
4	9230	M	19	24	L	105 1	6	0	5	Density lower left lung field.	
5	9257	M	34	30	L	103 1	6	0	9		
6	9261	F	17	24	L	104 1	2	0	9	Density lower left two-thirds of lung.	
7	9337	M	18	48	R	103 1	3	0	11	Marked delirium.	
8	9622	F	22	48	R	103 2	2	0	6	Density right hilus.	
9	10038	F	14	48	L	106 2	5	0	14	Density left middle lung.	
10	10732	F	10	30	L	106 3	6	0	14	Density left middle lung.	
11	10767	M	34	30	L	103 4-5 5	7	0	38	Density lower left lung field. Came near being fatal.	
12	10790	M	16	20	R	104 1-5 2	6	0	6		
13	10998	F	24	24	R	104 4-5 4	12	0	30	Density right lower lung field. Came near being fatal.	
14	11301	F	11	48	R	104 1-5 2	3	0	13		
15	11373	M	17	24	R	104 3	6	0	25	Density right lower lung.	
16	11467	M	34	24	R	102 4-5 1	2	0	11	Right upper lung field density.	
17	11523	M	17	24	L	104 3-5 2	4	0	5	Density lower half of left lung.	
18	11778	F	27	24	R	102 3-5 1	4	0	8	Density right hilus Tubular breathing, etc.	
19	11920	M	45	24	R	104 3-5 1	5	0	17	Density right lower lung.	
20	11954	M	22	48	R	104 2-5 1	3	0	9	Density right middle lung. Very delirious.	
Total Average			23	30		104 2	4.7	0	13.6	Maximum daily number of treatments 6 with an average duration of 30 minutes.	

cases classed as abortive as in those running a regular course.

4. Corroboration of the physical diagnosis of lobar and bronchopneumonia with the x-ray films was unsatisfactory.

5. Twenty consecutive uncomplicated cases were reviewed between the ages of 10 and 60 years coming under treatment with diathermy within the first 48 hours of symptoms, 60 per cent lasting 5 days and less:

average duration of symptoms 30 hours; average maximum temperature of 104° F.; receiving average number of treatments 13.6, 30 minutes each; two cases having developed grave symptoms (mortality 0 per cent).

6. By the combined activities of physicians in smaller towns with a graduate nurse easily trained with a portable machine, diathermy can be administered early to cases of pneumonia in the home.

*Discussion on Paper by Dr. R. M. Harbin*

DR. CYRUS W. STRICKLER, Atlanta: I am very sorry that I cannot discuss this paper from a personal experience. Therefore, I call to your attention some of the literature on the subject.

Robinson, in England, who has experimented with diathermy in the treatment of pneumonia, calls our attention to the fact that so far as his experience goes, it has done little other than to ameliorate the symptoms during the course of the disease. He said that the patients breathed better, had less anoxemia, the pulse ran slower, and less sedatives were needed, and altogether the patients were made more comfortable, but that so far as his observation went, it did not influence the course of the disease.

Simon, working in St. Bartholomew Hospital in London, in a series of cases he treated, said that he thought it did nothing more than ameliorate the symptoms, made the patient more comfortable, and in those cases that died, the post-mortem examination showed no evidence of any effect from the diathermy.

Robinson also called attention to the fact that the current from the diathermy has a tendency to spread. The current going around the ribs was difficult to get sufficient heat inside to be of any real value.

On the other hand, a man named Bergen and a man named Kreisler, working in the Rockefeller Institute, using thermocouple needles, placed in the lung, showed that the temperature in the lung with diathermy could be raised to 109 degrees in a normal lung, and it went higher in the diseased lung. If that be true, it would be bound to have some effect, for the reason that temperature in a lung of 109 degrees is certainly inhibitive to growth of the organism, and if it went to 112 it destroyed them.

The statistics as given by some men are very interesting. Statistics reported from the United States Marine Hospital in New York City give the mortality rate in treated cases as 19 per cent, and 42 per cent in untreated control cases. They also call attention to the fact some time later, where a number of cases were treated in another hospital, something over 700 cases, and the mortality was reduced to about 11 per cent.

Freeland, who is at the head of the physiotherapy department of one of the large hospitals in Portland, Oregon, said that no therapist, no matter how enthusiastic he might be, would claim there was any specific action, so far as diathermy was concerned, but that it did influence the course of the disease, in that the mortality rate was lower and the patients were altogether more comfortable. He quotes Clement as saying that if diathermy is used in the very beginning in the case of congestion, the case never goes on to red and gray hepatization.

In conclusion, I should like to call attention to the fact that it matters not what plan of treatment you use in pneumonia. It depends largely upon when you get your cases. You have a better chance for good results if you get your cases within twenty-four hours.

DR. HAL M. DAVISON, Atlanta: Dr. Harbin has stopped any criticism of his work by having the x-ray pictures to show he actually had pneumonia cases. We have had no actual experience in the use of diathermy in pneumonia. We have used it in asthma and chronic bronchitis and have discarded it because we thought the results were not commensurate with the trouble we have had.

Dr. Clement reported eighty-eight cases of pneumonia in the first forty-eight hours of the disease that he treated without a single death. This sounds doubtful, but I believe we can accept it as truth from that man.

Everyone who writes on this subject says the same thing about the relief of symptoms. They say that patients having this marked respiratory grunt will usually lose it after two or three treatments, and it doesn't come back. The pain is lessened, they breathe more deeply and slowly, and the pulse rate is lessened. Cyanosis is relieved and dyspnea is lessened. They claim that many of these cases will go ahead and be relieved by lysis, never coming to the time of the crisis.

Unlike these eighty-eight cases of Clement's and those of Dr. Harbin's many of these men I have read about give all sorts of cases, ranging from the first twenty-four hours to older cases, and many of them, Stewart among them, claim that there is a marked lessening of the death rate. I will read some of them.

W. B. Snow reports 67 cases of pneumonia treated with diathermy, with but eight deaths. G. B. Walsh treated a series of 154 pneumonia cases, 95 with diathermy, 59 without it. Twelve cases of the 95 died, and 12 cases of the 59 died. We know these figures are not absolute, because the death rate is going to vary, in different times, from a very small percentage to a large percentage. But taking cases as they come in, in the same year, there should be some similarity.

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#### CLINICAL CONTROL OF CHRONIC HEMORRHAGIC STATES IN CHILDHOOD

In his article (*Journal A.M.A.*, Jan. 20 and 27, 1934), I. Newton Kugelmass, New York, states that hemorrhagic states are unitary and unique. Their manifestations are as individual as the particular parent, as varied as the determining disease, and as widespread as are the offended organs and tissues. And yet they show few symptoms and fewer signs to be ever adequate for diagnostic differentiation without further scientific study. The author discusses the essential diagnostic procedures for hemorrhagic disturbances, a new classification of hemorrhagic states, dietary control of chronic hypofibrinemia, treatment of types of thrombocytopenic purpura, evaluating symptomatic thrombocytopenic purpura, vascular hemorrhagic diseases, and under hereditary hemorrhagic diseases he discusses hereditary hemophilia, familial thrombocytopenic purpura, hereditary thromboasthenic purpura, hereditary hemorrhagic telangiectasis and transitional hereditary hemorrhagic diseases.



PYLOROSPASM\*  
OR  
CONGENITAL HYPERTROPHIC  
STENOSIS OF THE PYLORUS

J. C. BRIM, M.D.  
*Pelham*

Pyloric stenosis is one of the rarer causes of vomiting in infants when all cases are considered. It is, however, sufficiently frequent to warrant its consideration as a possible cause in any case of vomiting beginning during the early weeks of life, especially when feeding has been suitable and no evidences of infection are present.

Pyloric stenosis may be of all degrees. There may be merely a tendency of spasm of the pyloric sphincter or *definite hypertrophy* of the *circular muscular fibers* of the pylorus and fibrosis with constant and almost complete occlusion of the pyloric orifice. In some cases the pylorospasm is merely part of a general gastro-enterospasm.

*Symptoms*

Symptoms pointing to such a condition are not usually marked until after the second or third week of life. Persistent vomiting from the time of birth is more likely to be due to other causes, such as duodenal atresia (the congenital absence or pathological closure of a normal opening or passage).

With pyloric stenosis infants vomit even though the feedings are of good composition and given at proper intervals. Pyloric stenosis is as frequent in breast-fed babies as in those artificially fed. The first symptom noticed is vomiting, is very similar to that due to other causes, occurring shortly after feedings or the taking of water. One striking characteristic of the vomiting is the fact that although first consisting merely of spitting up a small amount after feedings, it invariably becomes more forcible and finally projectile. The hypertrophied and dilated stomach becoming capable of expelling food in a projectile manner, often to a distance of several feet. Even water is vomited and

the vomitus often forced through the nose as well as the mouth.

As the results of obstruction at the pylorus, the gastric musculature hypertrophies. The normal gastric peristalsis becomes greatly accentuated until the waves may become clearly visible. These waves always pass from left to right and should not be confused with peristaltic waves in the transverse colon, which pass in the opposite direction. Such waves may be present constantly, or may be seen only after the infant has taken food or water. Gentle thumping or tapping the abdomen over stomach will often tend to excite the wave movement. Visible peristaltic waves of the stomach are seen in almost all cases of pyloric stenosis of any considerable duration; they are however, not absolutely pathognomonic of this condition, in as much as some gastric peristalsis may be seen in infants who have been vomiting excessively from other causes.

In a fair proportion of cases the thickened pylorus may be felt. The size of the tumor varies from that of the tip of the little finger to that of a large olive. The position of the pylorus may vary so that the tumor is not always felt in the same place. It is more frequently formed just below the edge of the liver in the nipple line, but may be considerably lower, in the neighborhood of the umbilicus. Some idea as to the location of the pylorus may be obtained by noting the point at which the peristaltic waves disappear.

In severe cases of pyloric stenosis in which a large portion of the food taken is vomited, very little absorption of water takes place. Consequently the urine is scanty and highly colored, and the infant becomes dehydrated, so with consistent loss of food and fluids the infant becomes markedly athreptic (marasmic, innutrition). On the other hand with the passage of a portion of food and fluids through the pyloric ring the nutrition may not be seriously impaired. Infants with pyloric stenosis are usually constipated, but may suffer with a starvation type of diarrhea. When the pylorospasm is a part of general gastroenterospasm, diarrhea is common.

The persistent vomiting results in a great

\*Read before the Medical Association of Georgia, Macon, May 11, 1933.

loss of chlorides from the body in the form of hydrochloric acid and to a lesser extent sodium chloride. This depletion of chlorides may result in a severe degree of alkalosis with accompanying symptoms.

In pyloric stenosis there is a tendency to ultimate recovery provided the infants nutrition can be maintained. In most cases the usual course of events, as judged from clinical symptoms and roentgenographic evidence, appears to be a progressive narrowing onset of symptoms; this is followed by a stationary period in which little change occurs. After the third or fourth month the tendency is for the pyloric aperture to become larger so that food passes more readily. The tumor, it is true, may become larger during this time, but with the growth of the stomach the pyloric opening also becomes larger, so that finally food may pass through readily.

#### Diagnosis

The diagnosis of pyloric stenosis is made on the basis of the symptoms and signs described. It is not essential for the diagnosis that a tumor should be palpated. Fluoroscopic examination after a barium meal is often of aid in the diagnosis of questionable cases, but is rarely necessary in typical, well-defined cases. Fluoroscopic examination is of special aid in differentiating between pyloric stenosis and duodenal atresia.

The character of the vomitus may give information of value in the differential diagnosis of pyloric stenosis. In pyloric stenosis the amount of food vomited is large and when the stomach has become dilated may be considerably greater than the amount of food taken at a single feeding, the residues of previous feedings being included. The vomitus is not bile stained because the constriction of the pylorus prevents the regurgitation of bile into the stomach, whereas in other forms of vomiting, especially those due to obstruction lower in the intestinal tract, bile is often present in the vomited material.

Congenital duodenal atresia may give rise to symptoms which are very much similar to those of pyloric stenosis, but there is no palpable tumor. The vomitus is usually bile-stained, and fluoroscopy after a barium meal

reveals passage through the pylorus with blocking at some point in the duodenum.

#### Treatment

The treatment of pyloric stenosis may be divided into medical and surgical methods. The choice of the method to be used will depend upon the age and nutritional condition of the infant, whether or not he is breast-fed, and the degree of obstruction present. The choice of treatment will also be influenced by such other factors as financial conditions, and the suitable hospital facilities and the surgical and nursing care.

In any case of suspected pyloric stenosis, medical and dietetic means of treatment should first be tried, but *should not* be continued unless some gain in weight is attained within a reasonable time. We can easily understand why it is dangerous to allow an infant to remain at stationary weight or to lose weight while waiting for natural processes of recovery, because once the nutrition is impaired, complicating infections are likely to occur, and the infant may finally reach such a condition that neither medical nor surgical means are effective. With very young infants, it is observed, especially those who are still breast-fed and who are not retaining sufficient food on which to gain, should not be weaned in order to apply any method of treatment, but should preferably be operated upon promptly. Also, infants who have been treated with more or less success for three or four months, whether breast-fed or artificially fed, usually do not require operation, as spontaneous improvement of the condition is the rule at this age. The application of medical means of treatment may require hospital care and nursing care over a long period of time. Surgical operation requires but a short period of hospitalization and when skillfully performed is accompanied by negligible mortality in the case of infants in reasonably good nutritional condition.

The chief medical methods of treatment consist in the administration of atropine, the feeding of thickened formulas, refeeding and gastric lavage. Always use a fresh solution of atropine. A suitable strength of solution is a 1:1000 dilution of atropine sulphate, ( $\frac{1}{4}$ -grain to one-half ounce of wa-



ter). The initial dose of this is one minim, or 1/1000 grain. The dose is then increased one minim at a time until the physiologic effect is observed, which consists of a diffuse blush of the skin occurring within ten or 15 minutes following the administration. The dose is best given 10 to 20 minutes before each feeding. The average dose for a one-month-old is 2 to 3 minims. Keep in mind the individual susceptibility of each patient, some require more, or less than others. The occurrence of a temperature of 103° or more, "atropine fever" is not necessarily a contraindication, although it is well to diminish the dosage somewhat.

As to feedings, foods thickened by boiling with cereal are best used, for most babies seem to retain thickened formulas better. Refeeding after vomiting has occurred, is a valuable means of introducing sufficient food to provide for the infants nutrition, attempted only when vomiting occurs within one hour after the time of feeding. Gastric lavage with a one per cent solution of sodium bicarbonate often times helps, by removing mucus and to allay gastric irritability. In some however tube feeding appears to stimulate peristalsis less than feeding by mouth.

An early use of this combination of treatment often produces excellent results.

#### *Surgical Treatment*

A number of surgical procedures have been used for the treatment of pyloric stenosis. The most satisfactory is the simple pyloroplasty originally used by Fredet and later developed by Rammstedt. The results are most satisfactory when the proper preoperative and postoperative care is given the patient, especially in regards to nutrition.

The factors which tend to increase the operative risk are, (1) a disturbance of the acid-base equilibrium of the body, (2) anhydremia, (3) marked asthenia due principally to malnutrition and anemia, and (4) the presence of infection.

Usual surgical asepsis is used.

The choice of anesthetics is 0.25 per cent Novocain in normal salt solution. The incision, about 2 inches long over the outer border of the rt. rectus is made. The pylorus exposed. Select the practically avascular area, on the upper anterior face of the pylo-

rus for the incision. The incision is done longitudinally with a blunt dissector. The divided edge of the muscles are spread apart, the submucosa that has been confined by the constricting bundle points out, and the relief of the stenosis is plainly shown.

If no bleeding results the pylorus is dropped back into the cavity and closure instituted.

#### *Prognosis*

In cases of pyloric stenosis seen at the onset of the condition there should be practically no mortality. Medical means of treatment are at first instituted, and in favorable cases the results may be excellent. The medical treatment should, however, not be continued if only indifferent success is met with. Prompt recourse to surgical treatment in such cases is almost invariably successful, and failures are due usually to some accident. The mortality is probably 20 per cent or more, considering all cases of pyloric stenosis. This high mortality, which is preventable, is due chiefly to failure to recognize the condition early, with the result that the infant is weaned and one feeding after another is tried with the idea of finding something which the infant can digest. The infant's nutrition suffers in consequence, and he becomes a poor risk for either medical or surgical treatment.

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#### *Discussion on Paper of Dr. J. C. Brim*

DR. GRADY N. COKER, Canton: Dr. Brim's paper is very timely and I wonder if this condition is not more frequent than reported. Many intestinal upsets in infants probably go undiagnosed, resulting in death from a pyloric stenosis.

I am not qualified to discuss the medical treatment of these cases. That should be left to the pediatrician.

Numerous operations have been performed to relieve congenital-hypertrophic-stenosis of the pylorus such as gastro-interostomy, pyloroplasty, pylorostomy and dilatation of the pyloric canal. All of these were superseded by Rammstedt's operation which was first described in 1912 by Dr. Rammstedt. This operation is a modification of earlier and less simple procedures and it seems now to be the operation of choice, since it can speedily be performed, is very simple and carries the lowest infant mortality rate. The first to suggest the incision of the serous and muscular coats alone was Fredet in 1908. He made a longitudinal incision which was stitched in a line at right angles and was really a Heineke-Mikulicz pyloroplasty without incision of the mucosa.

In our experience gas-oxygen anaesthesia is the an-

aesthetic of choice and gives about all the relaxation of the abdominal muscles that is required. Dr. William A. Downes of New York, in 1923, reported three hundred eighty-six operations of this type over a period of ten years with a mortality of 15.5 per cent. According to his statistics the mortality within the first four weeks after onset runs between six and eight per cent but is gradually increased after that time. The mortality rate seems to increase in direct proportion to the loss of weight in the infant and duration to symptoms. I am inclined to stress the importance of palpation of the pyloric tumor in the diagnosis of this condition. Cases without this sign seem to be justified for operation only in very rare instances. In infants that weigh seven pounds or less the mortality is three and one-half times as great as in those that weigh more than seven pounds. Also the mortality rate in breast fed infants is less than those artificially fed.

I think that those conditions called congenital-hypertrophic-stenosis of the pylorus which are relieved by medical treatment are spastic conditions and not a true congenital condition.

Our main fort should be to make an early, accurate diagnosis and skilled early surgical treatment as stressed by Dr. Brim.

DR. CHAS. E. BOYNTON, Atlanta: I am glad that Dr. Brim selected this subject and he presented it well.

It is true it is not so common as many diseases, but it is much more important than are many other conditions.

It is more important because if not diagnosed early and treated properly, the result may be fatal.

The history is always suggestive, but it may require repeated observations before the "stomach peristalsis" or "hour-glass contractions" are visible. Also, if the patient is markedly prostrated, the stomach contractions which previously may have been marked, may now be impossible to demonstrate and the vomiting cease, because of the prostration. Then, if the patient improves, both symptoms reappear.

In marked cases an x-ray plate for diagnosis is not necessary. Also, in such cases barium ingested may present added difficulty. It must be eliminated, if the pylorus is blocked. —you have added a problem rather than solved one.

I saw my first case about 1905. Apparently, they are more common now than then, at least, they are diagnosed more frequently.

Remember, the vast majority show no symptoms until 2 to 4 weeks after birth. They develop, nearly all of them, while on breast milk. They are weaned because of the vomiting. I do not recall having seen one while being artificially fed.

In feeding, I have had more success with fully peptonized milk and dextrose. Since this does not coagulate, it will slip through even a small pyloric opening. Thick cereals tend to clog, to increase the irritation, and while their weight may prevent "vomiting", it remains true that the more dilute solutions reach the intestine more easily and completely.

These children must have abundant fluids by rectum and often subcutaneously.

I usually increase atropin to larger doses than are customarily given. Fortunately during the past ten years, I have not run into a case that required operation. I do not mean to say that there are not operative cases.

I believe that a small number of these cases are born with a true pathological stenosis of the pylorus. But, I believe that in the vast majority of these cases the spasmodic element predominates.

I wish to stress the fact that very often the pyloro-spasm is part only of a general gastro-entero-spasm.

Time may prove that these cases should be placed under the more general heading of "Spasmophilia." There are instances of more than one case in the same family and some have "neurotic" parents.

DR. R. C. MCGAHEE, Augusta: Let me state briefly some of the findings made in a study of all cases of congenital hypertrophic pyloric stenosis treated in the St. Louis Children's Hospital. This comprises 142 cases seen between 1916 and 1932.

It is interesting that in the early years of this study the mortality was high but as the percentage of patients operated upon increased the mortality rate decreased. In 1928 all patients were subjected to the Fredet-Rammstedt operation and the mortality for the first time was nil.

Of the whole series 81½ per cent were finally subjected to operation with a mortality of 11 per cent. Of the remaining 18½ per cent not operated upon the mortality was 38½ instead of 11 per cent.

The effect of delay in operation was striking. Of all patients surgically treated within one week of onset of symptoms there was no mortality; those during the second and third week, 5 per cent mortality; those during the fourth to sixth week, 15 per cent, and after the sixth, 20 per cent.

The preparation of these patients for operation is time well spent. They are often dehydrated, athreptic, anemic, and in alkalosis. The restoration of fluid and acid-base balance by parenteral fluids either intravenously, subcutaneously, and intra-peritoneally, followed by blood transfusion is often essential to best results.

As a result of this study it was felt a word of warning might be given the surgeon and that was that he divide all the circular fibers. Three patients required a second operation for further division of circular fibers before symptoms were finally relieved.

DR. WILLIAM L. FUNKHOUSER, Atlanta: When a diagnosis of pyloric stenosis is made there is no argument. Surgery offers the only alternative. We should, however, make the diagnosis early while the patient is a good surgical risk. If the case is seen late, it may be safer to delay the operation until the child is prepared. If it is anemic or dehydrated, fluids and a transfusion will reduce the surgical hazards. If the diagnosis is a pylorospasm, treatment usually gives prompt relief. It is a partial steno-



sis with spasm that causes the greatest concern. Every case must be weighed individually. Personally I think that if there is a doubt as to the ultimate outcome after a moderate time spent temporizing, surgery should be advised. I wish to stress particularly the point Dr. Grove made; that you do not wash the stomach out prior to the operation, because the stomach being distended bulges into the incision, consequently much time is lost in packing off or locating the pylorus. After the abdomen is opened and the stomach grasped, then the release of the gas by a stomach tube simplifies the procedure. Postoperative care is very important and should be in the hands of the physician, co-operating, of course, with the surgeon.

DR. J. C. BRIM, Pelham (Closing): I wish to thank each of you for the interesting discussions as well as to express my appreciation for the instructive slides presented.

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### MANAGEMENT OF THE THIRD STAGE OF LABOR\*

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C. B. UPSHAW, M.D.  
*Atlanta*

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In the management of the third stage of labor the attendant is primarily concerned with the delivery of the placenta and membranes intact and complete. Good management demands that this shall be accomplished with the least possible shock and risk to the mother. To this end it is important for the management to be so conducted that blood loss shall not be excessive. It is of equal importance that strict surgical aseptic technique be maintained so that opportunities for infection are minimized.

To intelligently discuss the problems in third stage management, it is advisable to briefly review some features of the mechanism. Most observers are in accord as to the methods of separation and expulsion of the placenta. Shortly after the birth of the child, periodic uterine contractions begin again though with a great deal less force. These contractions cause a thickening of the uterine walls and a marked decrease in the uterine cavity. With a decrease in the uterine cavity, the placental site area becomes proportionately lessened. This naturally causes compression of the placenta. With continued contractions of the active uterine musculature

against the passive placental tissue, separation takes place between the two, when a maximum degree of placental compression has been reached. As soon as there is very slight separation of the placenta from the decidua, hemorrhage develops in the first area of separation. This comes from rupture of small vessels.

Attention is called to the fact that the hemorrhage is the result of and not the cause of the separation. However, the blood which increases rapidly acts as a fluid wedge, and with each contraction is forced between the layers, and probably aids and hastens the remainder of separation. As this process takes place there are certain well-known and valuable signs which may be observed. When any appreciable separation of the placenta has taken place there is descent of the cord. This becomes more noticeable as separation continues and becomes complete. Simultaneously there is a sort of pulling of the uterus upward and away from the placenta so that the fundus lies well above the umbilicus. The uterus is noticeably smaller and less rounded, the antero-posterior diameter being appreciably decreased. Also the characteristic trickle of bright red blood suddenly appearing in the vagina is noticed. Next the expulsion of the placenta takes place. In the majority of instances it will be delivered as an inverted umbrella with the membranes subsequently peeled off the uterine walls and enveloping the maternal surface. This is known as the Schultze's method. Aid is given this procedure by contraction of the abdominal muscles and usually by firm pressure of the hand of the attendant. Early expression after separation should be practiced since this prevents retroplacental concealed bleeding.

There are wide differences in what is considered to be the normal blood loss given by various authorities. De Lee gives 250 c.c. as average and states that an amount above 400 c.c. of blood should be considered as more than normal, while Williams found 344 c.c. as average and considers up to 600 c.c. to be within normal limits. In 1929, The American Obstetrical and Gynecological Society named a committee to study blood loss in the third stage of labor.

\*Read before the Medical Association of Georgia, Macon, May 11, 1933.

This committee, composed of Calkins of Kansas City, Plass of Iowa City and Litzenberg of Minneapolis, studied a large number of normal labors in their respective localities. As was anticipated these observers after study of a total of 5600 cases found considerable variations. They concluded that there are certain definite factors influencing blood loss. It was found that there was a direct relationship between the size of the baby and the amount of blood loss. Those mothers having larger babies, particularly long babies, were likely to have greater blood loss during the third stage. Also there was a distinct increase in blood loss with an increase in length of the third stage, although there was no relationship of blood loss to the length of the first and second stages. No relationship could be established between blood loss and either the age or parity of the patient. They emphasized that blood loss begins with the separation of the placenta before expulsion. It is of utmost importance that this should be a period of careful observation. During this interval partially concealed hemorrhage occurs. It is often not until after the placenta has been expelled, and the large clots are seen following, that one realizes the extent of blood loss occurring in the time between the separation and expulsion.

The likelihood of uterine atony and consequent hemorrhage after abnormal distention is well known. One should therefore be forewarned and guard against excessive blood loss during the third stage of labor in cases of twin labor, hydramnios, or abnormally large babies.

Pituitary extract as an agent in controlling blood loss undoubtedly has great value. It must be remembered however that this valuable drug even in the third stage of labor can be misused. Serious complication may result from its ill-timed administration. Many of the larger clinics give one cubic centimeter of this drug hypodermically as soon as the baby's head has been delivered in an effort to shorten the third stage and decrease blood loss. In the majority of instances it undoubtedly does save some blood. As to the value of this as a routine procedure, however, there is some disagreement. In the occasional case this drug stimulates the de-

velopment of a persistent contraction ring in the lower uterine segment and thus causes retention of the placenta. No less an authority than Williams states in his latest textbook that pituitary extract should be given only after the delivery of the placenta because of the possibility of this complication. Three times in the last three months I have witnessed serious complications from retained placentas. In each instance the patient had received early injections of pituitary extract. I am of the opinion that retained placentas in full term labors would be a rare complication if it were not for the too early administration of pituitary extract. At the colored Grady Hospital in Atlanta this drug is now given only after the placenta has been delivered. Certainly, where there is no atony of the uterus one is justified in waiting to give it until the classical signs of separation of the placenta are present.

One of the important complications of the third stage is that of the retained placenta. With the limited time given for this paper details cannot be discussed fully. The question of how long one should wait for spontaneous expulsion is important and often difficult to answer. After attempts at Crede method of expulsion have failed one will be largely influenced by surroundings and the amount of hemorrhage and relaxation of the uterus. It is not a trivial procedure to invade the uterine cavity to do a manual removal. It is equally serious to wait too long to remove the placenta. With persistent hemorrhage and in a clean case in a well-equipped hospital where assistance is available, I would advise manual removal. At the Grady Hospital we do not wait longer than two hours. This should be done with great care. All draperies should be replaced including fresh gowns. New gloves, preferably the long arm type, should be used. The vagina should be flushed out again with some reliable antiseptic solution. Insertion of the hand into the uterus should be limited to one time if possible because of the dangers of infection. One can hardly be too cautious in this major obstetrical operation. It should be constantly borne in mind that the greatest dangers are rupture of the uterus if manipulations are forced and hurried, and the intro-



duction of infection by poor or careless technique.

Furthermore the possibility of placenta accreta is to be thought of as a cause of every retained placenta. While this is an extremely rare complication occurring once in several thousand cases, yet when present is one of the most serious of all obstetrical complications. In the event one fails to find a line of cleavage between the placenta and uterine wall, immediate packing of the uterus followed by abdominal hyperectomy probably offers the best solution.

In all cases the placenta and membranes should be carefully inspected by the physician in charge, so that he may recognize any missing portions. This responsibility cannot be delegated to any inexperienced person. The decision to manually remove the missing portions or to leave them to nature must be made by a study of the surroundings and conditions of each individual case.

Most authorities consider the proper massage of the uterus to be the most valuable single measure in the control of hemorrhage during and following the third stage of labor. Many of you, from a large obstetrical experience, will no doubt be able to testify as to the efficiency of this reliable method which has the distinct advantage of being always available to the practitioner. The method of proper massage is important and should be stressed. The uterus should be supported well by placing the two fingers and thumb of one hand above the symphysis pubis, so that a large portion of the lower uterine segment will be partially encircled. With the other hand upon the fundus, massage and compression may be made at will. If perchance the uterus should be forced down into the pelvis with the fundus toward the spine, massage and compression is almost impossible. It is well to remember that it may, however, be easily brought forward and re-located by simply turning the patient well over on one side. Almost invariably the heavy uterus will be found to come from out of the pelvis and against the anterior abdominal wall again. In uterine atony and the resulting hemorrhage in a large percentage of cases it is surprising to find how readily one may control by the appli-

cation of these principles of massage. By carefully observing the tone of the uterus following delivery and the third stage and timely and persistent massage, the uterine pack rarely becomes necessary. When the uterus has contracted and remains firm massage should be discontinued. Often, well-meaning assistants may be seen vigorously kneading the firm and well-contracted uterus giving much discomfort and pain to the patient.

The type and degree of anesthesia used in labor has a direct and important relationship to atony of the uterus and, the consequent blood loss in the third stage. After operative deliveries such as version and forceps, requiring surgical anesthesia, the relaxation of the uterus and hemorrhage is noticeably increased. A. S. Bourne, writing in the *British Medical Journal* of July 1930, reports interesting experimental work showing the marked inhibitory effects of anesthetic drugs upon the uterine musculature. By means of a rubber bag inserted into the uterine cavity and connected with a manometer and revolving drum, he was able to graphically demonstrate the effects of even light chloroform or ether anesthesia upon the tone of uterine musculature. Incidentally it should be mentioned that he found gas oxygen anesthesia has much less inhibitory effect than either chloroform or ether. During the first part of the second stage of labor I prefer administration of gas oxygen mixture. This should be given intermittently with the pains until time for crowning of the head. Then the ether may be pushed to light surgical degree for the remainder of the delivery. Immediately after the birth of the baby the ether cone should be removed and the patient allowed to completely regain consciousness. This allows for the uterine tone to be promptly regained and thus prevents retro-placental bleeding. I think it an unwise procedure to continue anesthesia without interruption during the third stage. If the patient is kept asleep while the baby is cared for (and this may require several minutes in case resuscitation is necessary) and in addition, perineal stitches are taken, one need not be greatly surprised to find large blood clots or profuse

hemorrhage following the placenta. In addition, the bleeding for the first few hours immediately following the labor is likely to be profuse. If perineal stitches are to be taken there will be less blood loss by allowing the patient to wake up and have opportunity to complete the third stage normally. The anesthesia may then be re-administered for repair work. The uterus should be frequently palpated during this repair so that atony may be readily detected and controlled. I like to use local anesthesia of novocaine infiltration for perineal repair so that the amount of general anesthesia may be lessened. All repair work except perhaps the mucous membrane lacerations should be deferred until after the placental delivery.

It must not be forgotten that third stage or early post partum hemorrhage is not always due to atony or relaxation of the uterus. Lacerations of the cervix or vaginal vault or the para-urethral structures are often the site of hemorrhage. When bleeding continues after the uterus is firm and well contracted one should suspect injury of the soft parts. It is of utmost importance that one should make a diligent search for the site of such injury and take appropriate stitches to control. If these are neglected it is surprising how early and to what degree the patient becomes debilitated from the continued oozing of blood. Also the exposed areas are new avenues for possible ascending infection.

#### *Summary*

1. Knowledge of the mechanism of the third stage of labor as in the other two stages is essential to intelligent management.

2. Strict surgical asepsis must be maintained even more rigidly than in the first and second stages.

3. Factors influencing blood loss must be known and appreciated. Probably the most important method of preventing and controlling third stage and post partum hemorrhage is in proper uterine massage. Intra-uterine packing will rarely be necessary if careful massage is done.

4. The anesthetic should be discontinued during the third stage so that the uterine musculature may have time to regain its tone and thus allow the normal mechanism of separation to take place.

5. Atony is likely after unusual distention of the uterus and one must therefore guard against post partum hemorrhage after delivery of large babies, twins and after hydramnios.

6. In hemorrhage persisting with the uterus well contracted one must suspect cervical or upper vaginal injury. The prompt recognition and correction of these is of utmost importance.

7. Too early administration of pituitary extract may cause a contraction ring and retention of the placenta. Fewer complications will arise if this drug is given only after definite signs of separation have appeared.

8. Manual removal of the placenta is a serious operation. It should be done only in clean cases and under the most scrupulous technique. Uncontrollable hemorrhage is a positive indication. The possibility of placenta accreta, while rare, must be borne in mind.

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#### *Discussion on Paper of Dr. C. B. Upshaw*

DR. O. R. THOMPSON, Macon: The essential factors involved in conducting the third stage of labor are the complete removal of the placenta and membranes, prevention of infection and reducing the blood loss to a minimum. In preventing infection strict surgical asepsis must be maintained. In controlling the blood loss the physiologic mechanism of placenta separation must be favored and any procedure that favors an early and complete separation is worthy of consideration. Proper uterine massage no doubt favors the normal mechanism of placenta separation. I wish, however, to take issue with the essayist in condemning the administration of pituitrin immediately after the completion of the second stage. Twelve years' experience with most gratifying results justifies me in recommending and certainly a continued use of pituitrin early in the third stage. The use of pituitrin at this time favors a more rapid separation of the placenta, thus limiting the blood loss to a minimum and in no way interfering with normal separation. The average time required for the expression of the placenta following the use of pituitrin is about



six minutes, the average blood loss is about 180 c.c. The longer the time required for placental separation the greater the sub-placental hemorrhage. The shorter the time required for the placental separation the less the sub-placental hemorrhage.

In using pituitrin in the third stage of labor some form of ergot must be given after the completion of the third stage. Ergot re-enforces the action of the pituitrin and prevents marked relaxation of uterine musculature after the pituitrin has ceased to exert its oxytocic action. If the patient is under an anesthetic or unable to take medication by mouth, ergot must be given intermuscularly. Personally, I prefer gynergen. It produces no pain and in my experience has proven a most potent preparation.

The probability of causing a contraction-ring and retention of the placenta by the use of pituitrin in the third stage of labor has been suggested. Such has not been my observation. I have had to do only two manual extractions for retained placenta in the last twelve years. Such low incident certainly would not justify condemning pituitrin as a causative factor. There is one word in precaution that I would like to register and that is, never give pituitrin in the third stage of labor if you are dealing with a premature delivery. In a premature delivery you do not have a complete dilation of the cervix or retraction of the lower uterine segment. If pituitrin is given when this condition is present you are apt to have a contraction which would cause a retained placenta. The giving of pituitrin eliminates the necessity of uterine massage during the third stage of labor and I feel perfectly safe in requesting the nurse or the anesthetist to merely hold the fundus and ascertain when placental separation has taken place. I wish to condemn most emphatically the common custom of traction on the cord and forceful pressure on the fundus before the placenta has passed through the cervix. If this procedure is carried out the uterine cervix will be brought down to the vulva and when the uterus retracts to its normal position the cervix will certainly carry back with it some of the organism present at the vulva. The cervix can be prevented from coming to the vulva by refraining from traction on the cord and instead of the usual Crede maneuver, squeeze the fundus and encourage the patient to use her voluntary efforts.

The uterus should be watched for not less than one hour following delivery and should there occur a tendency to relaxation, proper massage will in vast majority of cases suffice to prevent hemorrhage. In case of large babies, twins or after hydramnios the physician should be on the lookout for post partum hemorrhage. In case of persistent bleeding in the presence of firmly contracted uterus injury of upper vagina or cervix must be suspected and an examination and repair if necessary must be made under most rigid aseptic conditions. I do not recommend the invasion of the upper vaginal tract as a routine following the completion of the third stage of labor.

DR. H. M. TOLLESON, Habira: This is one of the most important subjects from a practical standpoint which has been presented to this assembly so far. I would like to direct my remarks primarily to other general practitioners, and not to obstetricians.

There is an undeniable tendency on the part of many of us to have a sense of relaxation, the minute the baby is born. There is a sudden change in the morale of the delivery room, whether in the negro hut or in the hospital. Particularly after the baby cries, there is a sigh of relief and a letdown in the tenseness of the room. There is also a tendency toward a letdown in the aseptic technic of this most serious and dangerous major procedure.

As to pituitrin, I wish there could be a unanimous agreement on the part of all doctors of the world, never to give one minim of pituitrin until the completion of the second stage of labor.

I should like to emphasize the question of massage, the question of feeling the uterus. Many of us are negligent in this respect. We have been in a hurry, and want to get back home, especially if it is three o'clock in the morning. When the baby cries, when the placenta is delivered, instead of reaching for the hat, one should reach for the uterus.

DR. CHAS. E. BOYNTON, Atlanta: I should like to make one request for the babies not yet born. Please do not give their mothers pituitrin before the third stage of labor. There is not only the danger to the mother but also the danger of injuring the brain of the baby with resulting hemiplegia or even idiocy. I wish there were a law forbidding the use of pituitrin until after the safe delivery of the baby.

DR. W. C. GOODPASTURE, Atlanta: In discussing features of the management of the third stage of labor I wish to emphasize first that so far as maternal mortality is concerned this is the most dangerous stage of labor. Dr. De Lee has stated that it is accompanied by a higher mortality rate than either the first or second stage.

In regard to the use of pituitrin I prefer to follow what might be called a middle of the road policy, which is to use it as an antagonist to anodynes or anesthetics, and as a stimulant in case of uterine atony. Whether or not to use it should be decided on the merits of each individual case.

Statistics in a large maternity clinic have been compiled comparing morbidity and mortality rates in groups of patients classified according to the distance within the birth tract, instruments or the physician's hand were introduced during labor. These rates are lowest when no vaginal examination has been made. They rise gradually and in order through the following groups: vaginal examination, cervical manipulation, forceps, Vorhees bag, intrauterine catheter, version, and manual removal of placenta. Since the highest rate of morbidity and mortality of all obstetric procedures accompanies manual removal of the placenta, this procedure should be undertaken only with the most positive indications and under strictest aseptic

precautions. Here again each case must be decided on its own merits, taking into consideration the condition of the patient, amount of hemorrhage, length of time since delivery, availability of aseptic preparation, and the presence or absence of infection. In general, conservatism serves the mother best.

DR. C. B. UPSHAW, Atlanta (Closing): The importance of administration of pituitary extract after signs of *separation* of the placenta, should be borne in mind. One need not wait until after *expulsion* of the placenta. If pituitary extract is given after *separation*, the uterus immediately becomes firm and the operator may safely without fear of inversion exert pressure upon the fundus to express the placenta by the so-called "early expression" technique. By this method there is less likelihood of an hourglass contraction and retention of the placenta, and at the same time blood loss is minimized. This position is the one taken by the committee from The American Gynecological Society, after their exhaustive study.

#### FETAL RISKS IN FIRST STAGE OF LABOR FROM UMBILICAL CORD COMPLICATIONS: CORD DEMONSTRATED BY "AMINOGRAPHY"

John P. Gardiner, Toledo, Ohio (Journal A.M.A., Jan. 27, 1934), distinguished two groups of umbilical cord complicated cases in the first stage of labor. The first group of cases is practically symptomless. The child is fatally asphyxiated from a compression of the cord before the condition is recognized. This death must not be confused with that due to ablatio placentae. The stopping of the fetal heart is the only evident sign. It usually occurs during the first few pains in the first stage of labor but may occur from a few hours to several days before labor is definitely set in. The second group of cord complicated cases in the first stage of labor includes those which do show symptoms. The prognosis for this group is more hopeful, since there is a chance for the obstetrician to diagnose the cord complication and to save the life of the child. There are three cardinal symptoms that suggest a cord complication: delay in the progress of labor, disturbance in the fetal heart rate and a malposition of the fetus. (Pain in the placental site, a definite symptom due to traction, occurs later in the first stage and in the second stage of labor.) There may be, in a single case, all or only one of these symptoms. The choice of treatment to be followed in cord complicated cases is dependent on the diagnostic observations. Delay in the progress of labor (it cannot be said that the ideal treatment for delayed labor is to be satisfied with complacently giving a sedative and dismissing the case for the time being), variation in the fetal heart rate and persistent malposition of the child, the amount of amniotic fluid, the degree of hydration of the cervix and the dilatability of the perineum will influence the choice of the method of delivery. It is only rarely that a section must be performed in any cord complication.

## TRANSURETHRAL RESECTION OF THE PROSTATE GLAND\*

### A Report of 125 Cases

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It is with unusual interest that we present a paper on the relief of prostatic obstruction. Recent progress has been so definite and so radical that it now seems little short of a miracle that an affection producing as much trouble as prostatic hypertrophy causes, can be relieved by a non-cutting procedure. It seems, however, not altogether appropriate to call it non-cutting, for while the patient is not cut, it does cut the mortality rate in the hands of capable resectionists to one-fourth or one-fifth of that caused by prostatectomy; it does cut the post-operative stay in the hospital to about one-fifth of the time formerly required; furthermore, in like proportion, it cuts expense and cuts out most of the complications and pain which heretofore have been regarded as a necessary part of the price an elderly man had to pay for a free urinary stream and the rejuvenation incident to better renal function and eradication of urinary infection.

We can now assure the majority of patients, in reasonably good health, that prostatic obstruction can be relieved by resection and that full control of urination will be retained.

In order to avail ourselves of the best advantages gained by transurethral resection of prostatic obstructions, it is necessary to heed the early symptoms and not to wait until serious or irreparable damage has been done. Dangers and troubles associated with prostatectomy often cause the postponement of the dreaded operation until the patient has one foot in the grave and, too frequently the dirt is crumbling under the other foot before radical relief is sought. It is utter folly to think that a patient with urinary obstruction needs to become a mass of wrinkles and whiskers before resorting to measures to

\*Read before the Medical Association of Georgia, Macon, May 12, 1933.



obtain a free flow of urine. To await the worst symptoms is to increase the ultimate hazard.

The reasons which, heretofore, caused postponement of prostatectomy have now become the very ones which strongly demand early transurethral resection before the gland has reached a massive size and while the patient is still a reasonably good surgical risk. The dangers usually vary directly with the duration of the obstruction and the size of the mass to be removed.

What are some of the early symptoms which should be heeded? Frequency of urination during the night by elderly men nearly always means prostatic obstruction. Difficulty in starting the stream early in the morning and after long motor trips means the same thing. Urgency in voiding is another symptom of prostatic hypertrophy. Lack of force in the urinary stream is both an early and an important symptom which all middle-aged and elderly men should be urged to heed. The significant factor is the patient's voiding distance compared with his own past performances. The test is easily made and accurately determines the degree of obstruction.

The idea that age alone causes a weak stream has been shown to be entirely wrong by the distance properly resected patients can throw the stream. For instance, a patient from Florida stated that following resection he often underestimated how far the urine was going and not less than a dozen times voided over the toilet bowl instead of into it.

More advanced symptoms are: residual urine, infection, hematuria, complete retention and damage to the kidney function.

At medical meetings in years gone by much of the time devoted by urologists to prostatectomy was taken up in expatiating on methods for controlling bleeding by the use of packing or in demonstrating improved hemostatic bags; or in exploiting means of lessening pneumonia and shock; or in explaining advantages of two stage prostatectomy; or in describing measures for promoting renal function. In short, a mortality rate, and results of which we could not be proud, kept the urologist and surgeon on the defensive and at the same time often kept the prostatic aid until he was moribund.

Now we come with a different story; one

in which we relate with pride our experience with a revolutionary change in procedure; one in which the results are better than prostatectomy at its best; and one in which pain, complications and dangers are greatly reduced.

We desire also to report briefly an extension of the resection procedure which permits the removal of glands of very large size, heretofore requiring prostatectomy. The plan now suggested is *transvesical loop resection* of the large mass through a suprapubic incision at the first stage and subsequent transurethral removal of the remaining obstruction a week or two later when the patient's condition permits. This procedure happily combines advantages of resection with the safety afforded by suprapubic cystotomy and controls bleeding so well that packing or hemostatic bags are not necessary. The accuracy, safety and small amount of bleeding afforded by this combined plan of resection for massive hypertrophy leads us to think that never again will we have to do an old-fashioned prostatectomy. For three years we have removed intravesical masses of prostatic carcinomas in this manner but due to inexperience and stupidity we did not think of applying the procedure to benign obstructions. In the hands of experienced resectors, however, more than 95 per cent of prostatic obstructions can be relieved by transurethral resection while less than 5 per cent need transvesical resection.

We have now carefully and successfully done 125 transurethral resections and have, as a reward, the best average of good results with more happy patients than we have ever had with any genito-urinary procedure or operation\*

Owing to our inexperience at the start, or to the large size of the glands, five required a second resection to secure an adequate and full stream.

For the last 100 the average stay in the hospital after resection has been five and one-half days. Four had rather profuse bleeding at the time of resection, which was checked by fulguration before leaving the operating room. None had bleeding of any consequence following the operation. Nearly all had a varying amount of bleeding during the first four weeks, from time to time, as the scabs separated from the area

\*Since this was written, we have done 125 more resections with one death which was from cardiac failure; in our last 100 resections there has been no death.

resected. In six the bleeding was severe enough to cause the passage of a catheter, which in five was left in for two days. Suprapubic cystotomy was not needed or done in any for immediate or late bleeding.

One patient developed a prevesical infection which required incision to drain. All patients for four to six weeks experienced discomfort at the vesical neck as the scabs peeled away and left raw surfaces. For some this was insignificant, for others it was quite annoying. A varying amount of swelling made the stream not as good during the second and third weeks as it was at first and became later. Twelve had epididymitis.

Nearly all of the resected patients are free from residual urine, and, excepting a few with diverticula of the bladder or some such complications, are without pus in the urine.

One patient died of cardiac failure one week after resection. One began to sneeze as the resection was started and died of lobar pneumonia a week later. One patient getting along well at Grady Hospital, but with poor kidney function, insisted upon going home for Christmas and, over our protest, signed a release, left the hospital and died of uremia ten days after resection. The first two deaths appeared to be inevitable, or at least unavoidable. The third was not due as much to resection as to inadequate postoperative care.

A pertinent and frequent question is, will transurethral resection be permanent or is a recurrence likely? Sixty-five cystoscopies on patients, several to many months after resection, have shown surprisingly little if any tendency to scar tissue formation.

Bars and fibrous contractions show no tendency to recur. With grade three hypertrophies the likelihood of recurrence depends to a great extent upon the *thoroughness* of the resection. During the latter part of the operation, a finger in the rectum to press on prostatic masses while sections are made, greatly facilitates the removal of hypertrophied tissue, which if left might cause subsequent obstruction.

In some of the early work, timidly done by inexperienced operators, subsequent resections will undoubtedly be required. At its worst, however, this percentage will not equal the number heretofore requiring two stage prostatectomy and, in case additional resection is demanded, of one thing we feel sure, the patient will insist upon transurethral not prostatectomy relief, unless the original resector did a fumbling job.

Why bad results from transurethral resection? Judging by the study of reports so far published and, by our own experience, in the majority of instances, bad results from transurethral resection, as fatalities, have been due to inadequate preparation and inadequate removal of obstructing tissue.

Concerning inadequate preparation it is important to apply it, not alone to the patient, but also to the resector. Many excellent urologists have gone into this work rather light-heartedly and without realizing that special preparation was necessary. Transurethral resection differs widely from ordinary urologic work,

both as to procedure and as to unexpected dangers. For instance, at first few realized that, under spinal anesthesia, the bladder might be ruptured by fluid pressure or that the operator might easily become lost in the abnormalities incident to the pathologic vesical neck, made more confusing by incised tissue, bleeding, or sections incompletely cut. Confusion was probably made doubly bad for resectionists accustomed to a lens system different from the one embodied in the resectoscope.

The bad results, in certain sections of the country, have given the method a black eye but most of the accidents and complications have taught valuable lessons, especially to the resectionists in whose work they came. Most of all they all have shown convincingly that, while transurethral resection properly done, from the patient's standpoint, may seem a minor procedure, in reality it requires major care in diagnosis and preparation, as well as in the operative procedures. Today there are many more good resectionists than there were a year ago; here again, however, the price paid for this improvement has been high.

Concerning preparation of the patient, few things are more essential than is preliminary catheter drainage. This is necessary for two reasons; first, to secure the maximum kidney function and relief of back pressure cystitis, pyelonephritis and infections; second, to lessen bleeding. Traumatic blood from the introduction of the resectoscope is minimized by having the urethra and vesical neck previously dilated with retention catheters. Prostatic masses appear to be less hyperemic after a few prostatic massages and proper drainage. After such treatment there seems to be less bleeding as the sections are removed. Thus we feel that preliminary treatment not only lessens infection but also lessens the danger of bleeding at the time of resection.

We are in complete disagreement with the men who say that the removal of small amounts of hypertrophied tissue is all that is necessary. Dependence upon shrinkage of the gland later surely increases the danger of infection and back pressure damage. The best way to prevent pyelonephritis, cystitis, septicemia and damage to renal function is to remove sufficient obstructing tissue to permit the free flow of urine a few days later when the retention catheter is removed.



The complications, accidents and deaths recently compiled show in a definite manner that skillful work and sound judgment were many times lacking. Those with uncontrolled bleeding or a ruptured bladder should have been managed by *immediate* suprapubic cystotomy, not after the patient had been bled white or after hopeless infection had occurred.

In conclusion let us insist that consistently good results can only be obtained by *adequate preliminary care, adequate resections and adequate postoperative* attention, and that the *permanency* of the results will depend almost altogether on the *thoroughness* of the *resection*. Experience definitely justifies the dogmatic statement that if the diagnosis is correct, free urination will always follow an adequate resection, that a poor stream always means inadequate removal of obstructing tissue and that, if the resection is limited to tissue posterior to the verumontanum, permanent incontinence of urine will never occur.

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*Discussion on Paper By Doctors Ballenger,  
Elder and McDonald*

DR. EARL FLOYD, Atlanta: One might be biased by his enthusiasm for a certain thing, and then time and experience may change his opinion. Then again it may not. It certainly hasn't changed our opinion of prostatic resection. We believe that it is one of the greatest procedures that has so far developed in urology. *Prostatic resection is here to stay.*

In our experience the one big thing is not hemorrhage any more. Formerly we were very much concerned about this as occasionally an alarming hemorrhage would occur, but now this doesn't give the anxiety that it has in the past since we have means of controlling it better at the time resection is done.

We occasionally hear of a case of incontinence, but most of the cases of incontinence are not true incontinence but are really cases of uncontrollable frequency which finally subside. It is our belief that incontinence occurs much more frequently following perineal prostatectomy than following resection. The one big thing to our mind, however, is infection due to necrotic tissue. A few cases will pass necrotic tissue for a variable period of time, all of them developing a certain amount of prostatitis which requires observation and care for about a month in order to prevent them from developing some complication. It has occurred to us that probably vasotomies would help to prevent epididymitis which occasionally occurs following resection, but not so common as following prostatectomy. Prostatic resection has a much broader field than we had ever dreamed.

## INJECTION OF HYDROCELES WITH THE NEWER SCLEROSING SOLUTIONS\*

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### *An Experimental Study*

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EARL FLOYD, M.D.

J. L. PITTMAN, M.D.

Atlanta

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The purpose of this article is to give our experience with the use of the newer sclerosing solutions in the treatment of hydroceles. An effort has been made to choose the best possible solution obtainable, to determine the types upon which the treatment is most adaptable, and to devise a technique that can be carried out as an office procedure.

In the beginning, let us state emphatically that we believe the most satisfactory scientific way to handle a hydrocele is to first cure the underlying condition responsible for the blocking of the lymphatics, and then to remove surgically or surgically evert the sac that retains the fluid. Present medicine, however, may hold a few "short-cuts" by which one may arrive at the same end in selected cases, without being strictly scientific.

The injection of fluids into the sac for the purpose of a cure dates from antiquity. Among the earlier solutions used are wine, iodine, alcohol, phenol, and more recently, mercurochrome. Most of them, because of the complications that they produce, have been discontinued. In 1839 Sir Ronald Martin, of Calcutta, began the use of iodine. It has since been discarded, not only because of the pain and disability, requiring hospitalization, but because of recurrences and the occasional development of abscesses and sloughs. Phenol was advocated by Hutler in Germany in 1881, and it is still being used by some with success. It has been stated, however, that due to its caustic effect it may produce a lobulated sac with partitions of scar tissue, requiring subsequent treatment. In a personal communication, Dr. Miley Wesson states that he has used 5 per cent mercurochrome in hydroceles and has cured a few cases. One or two patients complained bitterly of burning after the injection, al-

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\*Read before the Medical Association of Georgia, Macon, May 12, 1933.

though he routinely withdrew all of the mercurochrome that he possibly could. He did not appear to be enthusiastic about it.

Since the injection method of varicose veins has become so successful, it was suggested to us that these solutions might be effective in the treatment of hydrocele because of the similarity of the structure of the tunica vaginalis and the vein wall. We became fascinated with the idea and began the injection of selected cases of hydrocele at Grady Hospital in January, 1932.

There have recently appeared six articles on the injection of hydroceles with these solutions. One by Porritt<sup>1</sup> appeared in a British medical journal in May, 1931. In this article he stated that he had either treated or observed twenty cases with apparently good results. Maingot<sup>2</sup>, of London, in the *Post Graduate Medical Journal*, in August, 1932, reported the use of quinine-urethane. In March, 1932, an article appeared in a Scandinavian journal by Kirschner<sup>3</sup>. Trolard<sup>4</sup> published an article in a French medical journal in July, 1932, reporting the use of peptone water. Martin Friedman<sup>5</sup>, of Germany, in June, 1932, reported four cases using invert sugar. There appeared an article in *California and Western Medicine*, May, 1932, by Kilbourne and Murray<sup>6</sup>, of Los Angeles, on the use of quinine dihydrochloride. In this they compared their results with the operative method. All of these articles, with the exception of the one by Porritt, of London, appeared after we began our work.

It was evident from the beginning that if the solutions were to be at all successful, it would be necessary to select certain types of hydroceles. Those with markedly thickened sacs, tuberculous types, and others, as was shown in two of our cases, would naturally not be influenced by this method. We selected the acquired, uncomplicated hydroceles, that is, hydroceles that contained from two to ten ounces of straw-colored fluid, that were unaccompanied by hernia and uncomplicated by marked changes in the sac or its contents. We did not exclude, however, chronic non-tuberculous epididymitis because most of the cases that presented themselves at the Grady Hospital Clinic gave a definite history of chronic gonorrheal epididymitis. Several of them had a firm epididymis. The types were determined as best we could by a Wassermann, palpation of the abdomen, transillumination of the sac, injection of the sac in some cases with skiodan followed by an x-ray to ascertain whether or not loculation was present, examination of the fluid by culture and microscopic test if necessary, and palpation of the testicle and epididymis following withdrawal of the fluid to exclude if possible gumma, tuberculous or neo-plastic origin of the hydrocele.

Twenty-four cases were injected, using quinine dihydrochloride in one case, dextrose and saline in two cases, varisol in one case, glycerin in another, and sodium morrhuate in the rest. We used sodium mor-

rhuate, 5 per cent solution, in the majority of our cases because of the uniform results that were obtained with its use in the injection of varicose veins, and the local reaction appeared to be less. It is a soap and has some antiseptic properties; it contains benzol-alcohol which preserves it from contamination. More recently, however, we have added phenol 0.5 per cent to it. This was done to make it more bactericidal.

The object of the injection of the sclerosing solutions is to produce sufficient irritation in the sac to bring about an aseptic inflammatory reaction which causes obliteration of the sac by fibrous tissue.

The technique that we used was simple and could be carried out very easily as an office procedure. After preparation of the skin with mercurochrome, a small welt is made with 1 per cent novocain over the most dependent portion of the sac. A large calibre needle is then inserted into the sac and the fluid withdrawn. In order to alleviate the initial pain we used two per cent novocain as a local anesthetic in the sac itself, instilling a small amount, allowing it to remain three minutes, and then withdrawing it. The solution is then instilled. Ordinarily we used eight cubic centimeters of fluid and allowed it to remain one minute. One-half of this amount is withdrawn and the rest remains. A little manipulation is then done and a snug-fitting support applied. The patient is allowed to go home and for the next few days there is some swelling of the parts, but not severe. A week later the scrotum feels firm and may contain some fluid. This is usually only a small amount and is absorbed in ten days. The swelling and firmness eventually disappear and the cure is complete within a month. Rarely is palpable induration of the sac present after this period of time.

The ages of the patients ranged from three to seventy-four years; eighty per cent of them were over fifty years of age, which prevented us from getting an accurate idea as to the effect of the sclerosing solution on the testicular function.

Ten of our cases have been injected over a year. It was necessary to re-inject two cases. Seven have reported and are apparently all right. The other three seemed to be all right when last seen, but letters sent to them this year were returned and we have not been able to locate them. One of our patients, a boy now four years of age, had had an injury when he was sixteen months old and developed a hydrocele two weeks later. He was operated on a year later and eversion of the sac done; afterwards he had to be tapped eight times, at monthly intervals. We injected the tunica vaginalis over a year ago and he has not had a recurrence since. There is no evidence of induration, with the exception of the post-operative scar.

Of the fourteen cases injected since that time, it was necessary to inject three the second time; one was a bilateral affair. There has been no return of the fluid in two, and the other is too recent to tell. One other case was tapped on the tenth day following injection, and again on the fifteenth day. He was not re-injected, however, and there has been no return of the fluid.



On the tenth day, following injection three and one-half ounces of brownish fluid was withdrawn. Microscopically it was found to contain a few leucocytes, red blood cells, and debris—no organisms were found. The next tapping revealed blood-tinged fluid, but only about fifteen cubic centimeters of fluid had accumulated. We do not feel that the last tapping was necessary.

We injected two cases with known pathology in the scrotal contents, with markedly thickened sacs and changes in the testicle and epididymis. A week following the injection we removed the sac in one case, and in the other the sac, together with the entire contents, to determine what effect the solution had on them. We found an acute inflammatory process superimposed on the old chronic affair, which might have gone on to suppuration. The injection of any such type of case is dangerous unless one is prepared to face the necessity of an operation.

From a study of these cases, we feel that the sclerosing solutions will obliterate the sacs of the acquired, uncomplicated hydroceles by a very simple office procedure and without severe pain. Infection did not occur in our cases, nor was there an accident of any kind, except in the last two cases mentioned. It must be understood that this method is applicable only to selected types of hydroceles.

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#### Discussion on Paper by Doctors Floyd and Pittman

DR. W. L. CHAMPION, Atlanta: I am very glad indeed that Drs. Floyd and Pittman have presented the subject of Injection of Hydrocele for your consideration.

Benjamin Bell, an English surgeon, in his system of surgery, published in 1804, not only gives in detail the method of injecting hydrocele, but states Dr. Lambert of Marseille, in 1677, gives particular account of his cures of hydrocele by injecting strong solutions of corrosive sublimate. Other liquids used in that period were spirits of wine, lime water and solution of alum.

We all know that within recent years tincture of iodine has been used as an injecting fluid. It produces severe pain, considerable reaction and is frequently followed by failure.

I have not had any experience with the preparation used by Dr. Floyd.

In 1908, at the meeting of this Association at Fitzgerald, I presented a paper reporting the cure of fifty-

one cases of idiopathic hydrocele by the injection of carbolic acid. Since that date at least one hundred and fifty more cases that were permanently cured without any untoward results could be added to that report.

All idiopathic hydroceles (not symptomatic hydrocele) should be injected. With so simple and so satisfactory a method of curing the condition a surgeon has no reason for the open operation. A patient with a symptomatic hydrocele that is due to a diseased testicle—such as cancer, tuberculosis or syphilis, should not be injected.

Damage can be done by a careless or inexperienced operator. I saw a case in consultation that was improperly injected, and I think the testicle was removed by Dr. Floyd at Grady Hospital. The acid in this case was either injected in the testicle or cord.

I first draw off the fluid, remove the cannula and examine the testicle to determine if it is diseased. If it is normal have the patient return when the fluid has reaccumulated, which it will do in a few weeks. Then I remove the fluid again and inject the carbolic acid.

I have not had more than half a dozen cases where it was necessary to inject the second time, and these failures were due to incomplete emptying of the sac before injecting the carbolic acid.

Now as to the procedure—grasp firmly with the thumb and first finger of the left hand the neck of the tumor and thrust the trocar into the sac, avoiding the testicle; be sure all of the fluid is withdrawn then connect the syringe containing fifteen or twenty minims of chemically pure carbolic acid to the same trocar and inject it into the sac. Remove the trocar quickly and knead the scrotum for a few seconds so as to distribute the acid over the entire surface of the sac. There is a sharp burning sensation that lasts only for a few seconds, as you know carbolic acid is a local anesthetic.

When I began the practice of urology in 1893 one of the first books that came into my possession was Keyes work on Genito-Urinary Diseases, written in the eighties by the father of Dr. Keyes, who now lives in New York City. The method he suggested at that time is the one given here, and used in all of my cases.

DR. WALLACE L. BAZEMORE, Macon: Mr. Chairman and Gentlemen: It seems that every year every branch of medicine is coming more to conservatism rather than to radicalism, and I think this is only another evidence that this is true. I haven't tried the newer sclerosing solutions, and I cannot compare them with carbolic acid injection, which is years old. According to Dr. Floyd, it is a step forward. I think the success in injection of hydroceles is due to thorough mixing and massaging of the solution into the tissues. I think Dr. Floyd is to be commended for again impressing us with the simple thing, and I think we should say it is equal to surgery. If it is satisfactory, with no complications, I do not see why we should not employ it instead of surgery, in uncomplicated cases.

DR. EARL FLOYD, Atlanta: We wish to thank the gentlemen for their discussion. In answer to Dr. Emery's question, the solution can be obtained from Searle & Company. It is a 5 per cent Sodium Morrhuate solution, to which has been added 5 per cent Phenol to make it bactericidal. In some of our cases we have used equal parts of 10 per cent Sodium Morrhuate and S. T. 37. However, we believe that the former preparation is more efficacious. In closing we wish to express our appreciation to Dr. Chas. Rushin and to Searle & Company for their helpful suggestions.

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*Presentation of a*  
 BRONZE PLAQUE OF  
 CRAWFORD W. LONG  
*to the*  
 AMERICAN COLLEGE OF SURGEONS  
*by the*  
 FELLOWS OF THE COLLEGE RESID-  
 ING IN THE STATE OF GEORGIA\*

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*Mr. President and Fellows of the American College of Surgeons:*

The Fellows of the American College of Surgeons residing in the State of Georgia appreciate the invitation of the College, given by Dr. Crowell, to present to the College a plaque of the Georgia doctor, Crawford W. Long, who was the first to employ anesthesia in a surgical operation, March 30, 1842.

On both paternal and maternal sides Dr. Long was a descendant from soldiers of the Revolution, living in the State of Pennsylvania. His father moved to Georgia, where Crawford Long was born in Danielsville in 1815. He received the A.M. degree in 1835 from the University of Georgia, and the degree of M.D. from the University of Pennsylvania in 1839. While in Athens attending the University of Georgia his roommate was Alexander H. Stephens, who afterwards became vice-president of the Confederacy. It is remarkable that these two college roommates should be chosen as Georgia's most illustrious sons to represent the state in the National Statuary Hall in Washington.

Following his graduation in medicine the young doctor spent one year "walking the hospitals" in New York City, before beginning practice in Jefferson, Georgia. From his preparation and associations Crawford

Long was not without background commensurate with his achievement.

In 1799 Sir Humphrey Davy had suggested that it might be possible to render patients unconscious in order to perform painless surgical operations upon them, but no one had the initiative and temerity to attempt such an experiment. While observing the pain attending operations, and the pain of labor, young Long felt that there must exist some means for preventing such suffering. In those days itinerant showmen went about the country giving exhibitions of mesmerism and hypnotism, and the use of nitrous oxide, or laughing gas. Dr. Long tells us in his own writings that on one occasion when he was with a party of young people some one wished to inhale some of this gas for its exhilarating effects. The young physician told the company that he had no laughing gas, but that he believed that the inhalation of sulphuric ether would produce the same results.

Ether was obtained and several of the party inhaled it, including Long himself. This procedure became popular, and constituted "ether frolics." Dr. Long noticed that when any of the party under the influence of ether reeled around the room in imitation of drunkenness, sprained ankles and barked shins resulted without causing pain. This observation led to the thought that if these persons were allowed to inhale enough of the drug complete unconsciousness might ensue and surgical operations be performed painlessly.

Accordingly, in his office at Jefferson, Georgia, March 30, 1842, in the presence of six witnesses, four of whom were medical students, Crawford Long put the conception into effect by removing from the neck of one James Venable a small tumor (presumably a sebaceous cyst), under ether anesthesia, without causing pain. This is a story which is not mere hearsay nor tradition, but one which is supported by abundant affidavits and documents now in the possession of the National Museum in Washington.

June 6, 1842, under ether anesthesia, Long removed another tumor from Venable's neck, and July 3, 1842, he amputated a toe of a negro boy, altogether performing at least

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\*Presentation address at Chicago, October 12, 1933, by Frank K. Boland, M.D., Atlanta.





eight operations successfully under anesthesia before 1846. It must be remembered that in these preaseptic days surgical operations were few and far between in a village of less than three hundred population.

There was no hospital near Jefferson, Georgia, in 1842, where Long could give a public demonstration of ether anesthesia. Atlanta, sixty miles away, was not a town until 1845. Long made no secret of the discovery, and certainly did not attempt to commercialize it. He related his experience freely to every one with whom he came in contact. He continued to use ether, and to advocate its use until the time of his death in 1878. He accumulated an extensive practice, and was considered one of the leading doctors of the state.

It is not alone as the first to use ether in surgical anesthesia that we pay tribute to Crawford Long on this occasion. We honor him also as an ethical physician and man of the highest character. While his modesty in broadcasting the discovery of anesthesia has deprived him of credit which he deserved, such a quality commands our profound respect in this day of changed ideas and ideals.

We bow in admiration to a dignified, courteous gentleman.

It is a welcome privilege to be permitted to present this memorial of Georgia's distinguished surgeon to the American College of Surgeons. On behalf of the Fellows of my state, I express our grateful thanks.

#### RELIEF OF PROSTATIC OBSTRUCTION

Clyde W. Collings, New York (Journal A.M.A., Jan. 13, 1934), emphasizes the facts that prostatic obstruction is relieved through the cysto-urethroscope or through a suprapubic or perineal incision and that it is of vital importance to the patient that the obstruction of the neck of the bladder be removed—if not, the resultant renal insufficiency will probably cause death. It is his present belief that a patient suffering from benign enlargement will be better off with a prostatectomy than with transurethral surgery, in the hands of many urologic surgeons (especially those who perform only the odd transurethral operation). Prostatic bars, obstructing prostatic carcinoma and scars, slight and moderate intra-urethral lateral and median lobes are ideally suited for urethroscopic excision by the trained transurethral surgeon. The markedly enlarged prostate, bulging into the rectum and urethra, had best be removed by prostatectomy. The author reports his observations during the past ten years in relieving ward and private patients of obstructions of the neck of the bladder.

## GLAUCOMA\*

J. ALLEN SMITH, M. D.

*Macon*

The choice of this subject is not made with the object of adding anything new but rather to bring to your attention some salient features, particularly as related to early diagnosis of this deadly eye disease.

The essence of glaucoma lies in the increase of the intra-ocular pressure from which all the other essential symptoms of glaucoma can be deduced.

As to what brings about this elevated intra-ocular pressure, we have several theories which as yet in spite of the vast amount of research work which has been done has not unearthed anything we can cling to. This is evidenced by the various types of operations exploited by different eminent men in an effort to lower this intra-ocular pressure.

Glaucoma has been known from antiquity. The first to recognize the increase in tension as the most important symptom of glaucoma were Mackenzie and particularly Von Graefe. Heinrich Muller, a man who deserves great praise in all that relates to the pathologic anatomy of the eye, was the first to demonstrate anatomically the pressure excavation of the optic nerve (1856); soon afterward it was accurately diagnosed in the ophthalmoscopic picture by Weber and Foster.

Then Von Graefe in the year 1856 for the first time employed iridectomy in glaucoma after having found it efficacious in various other diseases of the eye.

This was one of the most outstanding discoveries in ophthalmology and will always redound to his glory. We have only to remember that formerly every case of glaucoma inevitably led to blindness and that now, thanks to this procedure and its modifications, we can cure or certainly stop this deadly process.

Generally speaking, we have two types of glaucoma to deal with and recognize: First, an inflammatory type; and second, a non-inflammatory or glaucoma simplex. Inflammatory glaucoma runs a typical course

especially in the acute cases. This is the type of eye which is often confounded with iritis or irido-cyclitis and is accordingly treated with atropine which has a particularly deleterious action in glaucoma.

In the course of inflammatory glaucoma the following stages are distinguished: 1—the prodromal stage which usually precedes the inflammatory attack is characterized by attacks of obscuration of vision. The patient states he does not see as well having the sensation of a cloud or smoke before him. On looking at a light he sees a ring about it having the colors of the rainbow. During the attack there is frequently a feeling of tension in the eye or a dull frontal headache. Such an attack may last only several hours after which the eye returns completely to the normal condition once more both as regards its appearance and as regards its function.

In the intervals between the prodromal attacks the sight of the eye is normal, but the patient complains that to see near objects, he has to employ stronger and stronger glasses. The prodromal stage sometimes lasts only a few weeks, sometimes is protracted over months or even years.

2—The second stage is ushered in by an attack of acute glaucoma. This sets in suddenly after the prodromal stage has lasted a longer or shorter time.

The acute attack manifests itself by violent pain radiating from the eye along the first and second branches of the trigeminus. The patient complains of pains in the head, the ears and the teeth. They deprive him of appetite and sleep and very frequently are attended by nausea and vomiting. Simultaneously with the onset of pain, the visual power falls rapidly away and the patient may only be able to see fingers at a few feet.

Objective examination shows the appearances of a violent external inflammation—edema of the lids and chemosis of the conjunctiva which is greatly congested. Likewise the pupil is dilated and immobile and from the pupil we get a grayish-green reflex. Ophthalmoscopic examination is impossible on account of the marked cloudiness of the cornea and the tension of the eye is con-

\*Read before the Sixth District Medical Society, Macon, June 28, 1933.



siderably elevated, in some cases stone hard. Of course, this is the time to act in glaucoma for after subsidence of this attack the eye may remain quiescent for rather a long time and the patient entertains the hope of a permanent cure. Then a new attack sets in and with every such recurrence whether at shorter or longer intervals, the visual acuity is cut down.

Inflammatory glaucoma is a disease of advanced life: it is found most frequently between the fortieth and seventieth year. It never occurs in childhood and very rarely in youth. It attacks women more than men. An interesting observation has been made by Dr. Clyde McDonald of New York City, in reference to the incidence of glaucoma in the pregnant woman. He states that during twenty years as consultant to New York Lying-in-Hospital he has never seen a single case of glaucoma, his only explanation being that if present it was inactive during gestation and reasserted itself after the pregnancy was terminated.

A disposition towards inflammatory glaucoma appears to belong principally to hypermetropic or farsighted eyes whereas strongly myopic or nearsighted eyes are regarded as having almost complete immunity against the disease.

Furthermore, mental emotions, arteriosclerosis and habitual constipation predispose to glaucoma. Among Jews inflammatory glaucoma is much more frequent than among Christians. Furthermore, there are many families in which glaucoma is inherited.

Finally, as to the non-inflammatory or simple glaucoma: In this type of glaucoma the increase of tension sets in very gradually, so that no inflammatory phenomena are produced. The eye either looks quite normal externally or we may note a somewhat dilated and sluggish state of the pupil. Often on the first examination no increase of tension is found at all, and it is only on examining the eye repeatedly that we succeed in demonstrating the tension is elevated.

On consideration of the fact that in glaucoma simplex marked external symptoms and sometimes indeed any manifest increase of tension are wanting we are thrown back upon the ophthalmoscopic examination for

the establishment of the diagnosis. Such an examination shows the presence of a total excavation of the optic nerve, the depth of which corresponds to the duration of the process.

The subjective symptoms since the inflammatory attacks and the pain are wanting consist almost exclusively of the disturbance of vision. This manifests itself by gradual diminution of the sight and in many cases also by transient slight attacks of obscuration, like those belonging to the prodromal stage of inflammatory glaucoma. The decrease in vision expresses itself in a concentric contraction of all fields of vision, whereas the diminution in central vision usually develops late. Thus a patient may read normally and yet on taking the field of vision we find that he only has pin-hole vision or central vision, the peripheral vision having been obliterated by this insidious process.

Glaucoma simplex always attacks both eyes. In contra-distinction to inflammatory glaucoma it sometimes occurs in young people, and attacks men as frequently as women.

In discussing this subject I realize that I have only touched upon the diagnostic phase of this disease, but that, after all, is the phase which is most sadly neglected.

Without exception practically all of these cases, after having glasses changed four or five times their vision steadily growing worse, consult an oculist to find they have a disease of the eye, a condition which lenses can neither retard nor help.

Since the condition is frequently seen at the presbyopic age we may suggest to the patient that he merely needs a stronger glass for reading and thus be responsible for the disease gaining headway.

In the present-day enlightenment and knowledge of medicine I feel that a patient is entitled to a thorough eye examination by a competent oculist and that we as physicians, should see that they are directed in the proper channel.

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#### SCIENTIFIC EXHIBITS—AUGUSTA MEETING

All members of the Medical Association of Georgia are invited to make scientific exhibits at the next annual session to be held at Augusta, May 8, 9, 10, 11, 1934. Please write to Dr. John W. Brittingham, Doctors Building, Augusta, Chairman of Exhibits.

**THE JOURNAL**

OF THE  
MEDICAL ASSOCIATION OF GEORGIA  
Devoted to Welfare of Medical Association of Georgia

139 Forrest Avenue, N.E., Atlanta, Ga.

FEBRUARY, 1934

**LARYNGEAL DIPHTHERIA**

Even though diphtheria has been treated scientifically for a great number of years there still exists considerable misapprehension regarding certain phases of this condition. Particularly does this apply to the laryngeal type of this malady.

With the anti-diphtheritic measures in vogue, there should be no occurrence of diphtheria. Information concerning its prevention, however, has either gone unheeded in certain quarters or has altogether failed to reach a class of citizens who particularly need to be immunized. At any rate, there appear, usually in the autumn, too many instances of this altogether preventable infection.

The laryngeal form of diphtheria is especially distressing and dangerous, owing to the degree of laryngeal stenosis and the consequent dyspnea accompanying it. It is in the treatment of this that these remarks are mainly concerned.

In that remarkable appliance originated by O'Dwyer, and later modified by Lynah, suffocation in diphtheria of the larynx can be prevented. Intubation is easily mastered by a little practice on the cadaver or a piece of rubber tubing, and offers a quick and ready means of relieving a most distressing condition. However, intubation should never be resorted to in those instances where careful and competent after-supervision is not practicable. It is not infrequent that the tube is expelled in the act of coughing and, of course, a physician should be readily accessible for its prompt replacement.

Where a physician is not available for instant service in re-intubating, tracheotomy should be performed. This is safer, because there is less likelihood of a tracheotomy cannula being displaced than there is of a tube being coughed out of the larynx.

In any event, methods of relieving exces-

sive dyspnea should not be delayed beyond the point of moderate contraction of the supra and infra-sternal notches, and the intercostal spaces. Cyanosis marks the last stage of difficult breathing, is of short duration, and should never be allowed to supervene before remedial measures are instituted. In a great many instances relief is postponed too long.

Opiates are harmful in laryngeal obstruction. For the relief of the great restlessness occurring in this condition, relief should be sought through the re-establishment of unhindered respiration. When this is effected, sedatives are rarely, if ever, required.

In this connection, it might be emphasized that general anesthesia is contra-indicated in those who are affected with difficult breathing. This applies with equal force whether the dyspnea is occasioned by diphtheria or by the presence of other mechanical laryngeal obstruction, including foreign bodies. General anesthesia abolishes accessory respiratory efforts, and is exceedingly dangerous because voluntary muscular action toward supplying the lungs with air is destroyed.

Symptoms of dyspnea occurring in a child, without apparent cause, should be regarded as due to diphtheria until proved to be otherwise. Prompt response in these cases, including the employment of anti-diphtheritic serum, will yield surprisingly good results in a high percentage of instances.

Augusta

S. J. LEWIS, M.D.

**PROGRAM—AUGUSTA MEETING**

The Committee on Scientific Work will consider all titles for papers which may be submitted on or before March 1st. The program for the eighty-fifth annual session of the Medical Association of Georgia will be made up immediately after March 1st for the Augusta session to be held May 8, 9, 10, 11, 1934.

Members of the Association are invited to send titles to any member of the Committee.

Respectfully,

WM. R. HOUSTON, M.D., *Chairman.*

JOSEPH YAMPOLSKY, M.D.

S. T. R. REVELL, M.D.

ALLEN H. BUNCE, M.D., *Sec'y.-Treas.*

*Committee on Scientific Work.*



## CANCER OF THE LIP AND MOUTH

Carcinoma of the lip occurs, for the most part, in men chiefly between the ages of fifty and seventy. Probably less than 10 per cent of cases occur in women. Although it is a condition most often found in persons past middle life, age is no criterion upon which cancer of the lip may be ruled out in considering the diagnosis of a chronic lesion on the lip of any adult. In practically all cases the lower lip is the site of the lesion and any portion of the lip may be involved. There is an occasional occurrence of carcinoma of the upper lip or of carcinoma of both upper and lower lips.

There are two great divisions under which all lesions of this area may be classified. They are papillary or raised wart-like lesions and ulcerative or crater-like lesions. The papillary type is slower in growth and slower to metastasize or to extend locally. The duration of this type is longer and its response to treatment better than the ulcerative type.

From the gross appearance and clinical findings, carcinomas of the lips are variously classified but in general are divided into small lesions without evident metastases; large lesions without evident metastases and lesions with metastases. Metastases are usually to the glands in the neck on the same side as the lesion but may be on the opposite side. It is extremely rare to find metastasis to any organ in carcinoma of the lip. The local extension may involve the mandible.

Predisposing causes of this condition seem to be the use of tobacco, especially pipe smoking, the presence of keratoses or leukoplakia and the infliction of constant trauma, usually by ill-kept teeth.

Any ulceration or warty growth on the lip of an adult which does not respond to the ordinary forms of treatment should be looked upon with suspicion. In such cases the burden of proof is on the one who says it is not malignant. Chancre, of course, must be ruled out even in the presence of a negative Kahn or Wassermann test. Indurated edges or crater-like ulcerations may prove deceptive. The presence of enlarged glands in the neck, their location and characteristics may be of aid in the diagnosis but at times these may confuse rather than clarify the situation. En-

larged glands, for instance, may be present in the case of a malignant growth and the enlargement not be due to metastases. Generally speaking, the glands in a patient with a malignant growth become involved later and are firmer than in syphilis or secondary infections.

The treatment of carcinoma of the lip varies somewhat in different clinics. The degree of involvement naturally influences the treatment also. In general, however, treatment may be surgical or by radiation or by a combination of these. If the lesion is seen and treated early, when there is no clinical evidence of extension beyond the local lesion, free excision with the electro-cautery knife is at times sufficient, though we prefer to radiate the glands of the neck and submental glands, believing that in this way we give the patient the benefit of the doubt. In more advanced cases with few involved and enlarged glands, not adherent, surgery plus radium and deep roentgen ray therapy is used. In advanced, hopeless cases, usually radium and the roentgen ray are used as a palliative measure.

Results in any case depend upon the stage of the growth at the time treatment is instituted and upon the skill and thoroughness with which treatment is carried out. Early lesions without metastases should yield at least 90 per cent cures. The prognosis after the early stage varies with the size of the lesion locally and the presence of metastases. After metastases occur, no treatment will yield satisfactory results. Some cases will be benefited in the later stages, however, and a few will be cured.

### *Carcinoma of the Mouth*

Carcinoma of the mouth carries a mortality of 75 to 90 per cent. It occurs most often in men in the fourth to sixth decades and may involve any portion of the mucous membranes in the mouth or cheeks. Predisposing causes are syphilis, leukoplakia, use of tobacco, trauma by sharp or rough teeth or ill fitting dentures, chronic glossitis, chronic ulcers or papillomas of any type.

The appearance is practically always that of an indurated ulcer and here, as in lesions of the lips, any ulcer within the mouth of

an adult which fails to respond to the usual therapeutic measures, such as the extraction of jagged teeth in the region of the ulcer and antiseptic mouth washes, should be looked upon with suspicion. Syphilis, of course, should be ruled out as in lesions of the lips. The presence of enlarged glands in the neck may accompany any ulceration in the mouth and, therefore, may be of very little aid in making a diagnosis.

As a rule, treatment is by radiation with a combination of x-ray and radium therapy. This is due to the relative ease of introducing radon or small radium needles into the growth or of surface application of radium to the lesion in comparison to the extreme difficulty of radical removal of the lesion surgically with its liability of marked alteration of the appearance of the patient and in some cases, considerable loss of function of the parts involved. In any case, treatment of any type, unless instituted very early will yield very unsatisfactory results. Extension to the glands of the neck presages a very gloomy prognosis.

CHAS. H. WATT, M.D.

Thomasville.

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#### ALBERT STEINER WARD OF GRADY HOSPITAL

Many newspapers throughout the state have carried editorials relative to enlargement of the facilities at the Steiner Ward of Grady Hospital for the treatment of patients suffering from cancer.

The Fulton County Medical Society of Atlanta, consisting of over 400 physicians of the Medical Association of Georgia appointed a committee to investigate whether there was or was not a need for enlarging this institution.

A survey of the hospitals of the city of Atlanta, which are: The Georgia Baptist Hospital, maintained by the Baptist denomination; Emory University Hospital, maintained by the Methodist denomination; St. Joseph's Infirmary, maintained by the Catholics; Piedmont Hospital; Crawford W. Long Memorial Hospital, and the Atlanta Hospital, reveals a bed capacity of 900. It was further found that during the year 1933,

there was a vacancy in these hospitals which averaged over 55 per cent. This meant that each day of the year these hospitals were less than half used, having vacant beds totalling 575. It was also found that these various institutions were equipped with x-ray machines suitable for treatment of cancer, and that there was radium available sufficient to take care of all cases which might present themselves

Investigation of the hospital situation throughout the state, found practically the same percentage of vacancies. Also that there were in various localities institutions adequately equipped with x-ray machines and which had radium available for the treatment of cancer. For example: Augusta, Macon, Savannah, Sandersville, Thomasville, Rome, Americus, Albany, Dalton, Valdosta and Hoschton. In the adjoining states of Florida, Carolina, Tennessee, Alabama, Louisiana are many hospitals with excellent equipment.

This investigation proved that the denominational and private hospitals of the city of Atlanta and the state at large are tax-paying institutions and all of them, during the present state of national affairs, have lost money in their operation; and after a study of the various reports of these hospitals indicates that they spend each year a large sum of money in the care of the deserving poor patients.

Therefore, in view of the information outlined above, it was the opinion of the Fulton County Medical Society that there is no need for the borrowing of a large sum of money from the United States government in order to provide additional hospital beds as there is not, nor has there been, any need for more hospital facilities in Atlanta or the state of Georgia and that in the Society's opinion the city of Atlanta should not, in justice to these tax-paying institutions, enter into unfair competition with them.

*Committee on Public Policy and Legislation, Fulton County Medical Society.*

JAS. J. CLARK, M.D., *Chairman*

HOWARD HAILEY, M.D.

HERBERT B. KENNEDY, M.D.



## WOMAN'S AUXILIARY OFFICERS

President—Mrs. J. Bonar White, Atlanta.  
 President-Elect—Mrs. J. E. Penland, Waycross.  
 First Vice-President—Mrs. J. J. Pilcher, Wrens.  
 Second Vice-President—Mrs. R. C. Pendergrass, Americus.  
 Third Vice-President—Mrs. G. Hugo Johnson, Savannah.

Recording Secretary—Mrs. Warren A. Coleman, Eastman.  
 Corresponding Secretary—Mrs. E. A. Allen, Atlanta.  
 Treasurer—Mrs. Chas. Usher, Savannah.  
 Historian—Mrs. E. R. Harris, Winder.  
 Parliamentarian—Mrs. J. M. Barnett, Albany.  
 Editor—Mrs. W. A. Selman, Atlanta.

### INVITATION

*To the Members of the  
 Woman's Auxiliary:*

We are pleased to extend to the members of the Auxiliary a most cordial welcome to meet with us in Augusta, May 8, 9, 10, 11, 1934.

It will be a great pleasure to have you with us. We hope as many members as possible will be present.

With kindest regards and sincere good wishes, we are

Very cordially yours,

*The Woman's Auxiliary to the Richmond  
 County Medical Society.*

By ALMA G. CHANEY, *President*  
 (Mrs. Ralph H. Chaney)

SARAH A. CRICHTON, *Cor. Sec'y.*  
 (Mrs. Robert B. Crichton)

### HYGEIA

The task assigned to the Auxiliary of promoting health education is one worthy of our every effort. Arranging health talks in the schools, showing health films, and promoting the sale of *Hygeia* offer the main methods of approach to this task. The medical profession is awakening to the possibilities offered by radio health broadcasts, but traditional ethical policies no doubt hinder the free use of this method of health education.

The American public is by nature inquisitive, and the average American citizen finds time to read magazine and newspaper articles, and to listen to radio talks, on the subject of health. Too often misleading information is broadcast over the radio and published in magazines and newspapers under the protection of paid advertising. The quack and the charlatan still reap a golden harvest. If we can offer the public sound information, at a moderate cost, then some leaven may be placed in the dough of health ignorance. *Hygeia*, the layman's publication of the American Medical Association, provides a

very effective vehicle for distributing authoritative information on health and disease.

Since *Hygeia* cannot be distributed free, and since it is not within the reach of all families, then we must attempt to reach many families through our schools. *Hygeia* in our schoolrooms will mean health in our homes, and *Hygeia* can be placed in our schools at a very moderate cost. Once it is placed there for a year, it is most probable that the schools themselves will find a way of keeping it there. At the low club rates provided by the publishers, less than a nickel a year from fifty pupils will provide a copy of *Hygeia* for a school or a class. If every county Auxiliary will place *Hygeia* in the schools of the county for one year much will have been accomplished toward giving *Hygeia* the circulation it deserves, and far more toward educating our children in health matters. There are several ways by which funds may be raised for such a purpose, familiar to all of you, overworked perhaps, but still capable of producing money: Sponsoring shows at local theatres on a percentage basis; benefit bridge parties; rummage sales; cake sales; tag days; minstrel shows; benefit "script" dances, etc. In one county in Georgia, the sale of tuberculosis seals was handled by the county Auxiliary, and sufficient commission realized to place a copy of *Hygeia* in every school in the county.

The "chain" idea may be used to increase the circulation of *Hygeia*, and may be employed as follows: Let every member of the local Auxiliary compile a list of twelve mothers. Those in the same locality should meet and compare lists to prevent duplication of names. Each month, after *Hygeia* has been read by the subscriber the magazine is passed on to a non-subscriber. A different mother is selected every month, and she is asked to pass *Hygeia* on to someone else when she finishes reading it. In this way the readers get a sample of *Hygeia*, and a desire to subscribe may be generated. The loan of the magazine should be followed up by a personal solicitation of a subscription. Try this in your county.

Do not overlook one important factor in any scheme to increase the sales of *Hygeia*—be sure that every physician in your county or community is a subscriber. While written primarily for the layman, the excellent, concise discussions of many subjects are very convenient for the busy physician, who has so much to read and so little time in which to read. The entertaining way in which diseases are discussed makes reading a pleasure rather than a task to a tired doctor. To those practitioners interested in the care of children, the articles on child training and on preparation of diets for children are alone worth the price of the magazine.

The recent investigation of the cost of medical care has greatly aroused public interest. The funds now being expended for direct medical relief by our national government denote an increasing interest in medical care on the part of the government. Whatever may arise from these activities, they should make us, as wives of physicians, keenly conscious of the necessity of educating the public to use the services of the family physician when questions of health arise. This is the doctrine of *Hygeia*; we must help spread its teachings. Double and redouble your efforts to place *Hygeia* in the hands of parents, teachers and children.

MRS. R. C. PENDERGRASS,  
Americus. *Second Vice-President.*

#### HISTORIES OF COUNTY AUXILIARIES FOR COMPILATION WITH WOMAN'S AUXILIARY TO THE MEDICAL ASSOCIATION OF GEORGIA

When the Historian assumed office in May, 1933, she found the Auxiliaries were doing very little historical work.

The Historian, therefore, arranged an outline which seems to cover the field in a comprehensive manner.

At the Macon convention, May, 1933, an official binding of navy blue with lettering and seal done in gold, was adopted and will be used for all volumes.

The County Historians are urged to follow this outline closely in compiling data and to follow all rules stated herein.

##### I—Organization

- Purpose
- By whom
- Time
- Place
- Membership
- Officers

##### II—Record of each succeeding year, as to

- Officers
- Membership
- Members who have held District and State

##### offices

- Health programs
- Health films
- Health film library fund
- Public relations

##### Activities—Hygeia

- Legislation
- Students Educational Loan Fund
- Publicity
- Cooperation with Medical Society
- Social
- Keeping of scrapbook

##### III—Rules

County Histories should be typewritten with black ribbon on paper 8 1-2 x 11 inches (supplied by State Auxiliary). Three clear copies should be made as carbon copies are apt to become dimmed with handling. One copy is to be retained by Auxiliary and the other two are to be forwarded to State Historian for State and National Archives.

Leave one inch margin on the left side and 1-2 inch on the right. Use one side only of paper. Single space.

All County Histories must be in by April 1, 1934, in order to bind them for State Convention.

If a draft of history is sent Historian by March 1st, she will be glad to edit it.

The splendid program of activities carried forward by the Woman's Auxiliary to the Medical Association of Georgia covers a wide field, but, with the exception of health, no part of this program is of greater importance than historical work. If we are to leave a clear and accurate record of the part the medical women of Georgia have played in this great drama, we must compile that record now.

MRS. ERNEST R. HARRIS,  
Winder *Historian, Woman's Auxiliary*

#### BARROW COUNTY AUXILIARY MEETING

Mrs. C. B. Almond was hostess to the Auxiliary of the Barrow County Medical Society at her lovely home on Candler street, Thursday afternoon on January 18th.

The meeting was opened by repeating the Lord's Prayer in concert.

Mrs. C. B. Almond, treasurer, reported that dues had been sent to state treasurer and that a contribution to the Student's Educational Loan Fund had been made.

Mrs. S. T. Ross, Historian and Corresponding Secretary, reported the scrapbook was up to date and that five cards had been sent to the sick.

In the absence of Mrs. W. L. Mathews, Organization Chairman, Mrs. Stinchcomb was welcomed as a new member by the President, Mrs. E. R. Harris.

Mrs. C. B. Almond, Health Education and Public Relations Chairman, reported that a health program had been co-sponsored by the Woman's Club and



Medical Auxiliary. Mrs. J. Bonar White, President of the Auxiliary to the Medical Association of Georgia, made an address on Mother Welfare, Personal and Social Hygiene. Preceding this program, Mrs. W. T. Randolph gave a delightful luncheon at her beautiful home. Mrs. Almond also reported that the Woman's Club and Medical Auxiliary had sent a box of shorts, pillow cases, sleepers, and scrapbooks to the children at the State Tuberculosis Sanatorium, Alto, for Christmas presents.

It was reported that Mrs. Randolph, *Hygeia* Chairman, had secured four subscriptions to *Hygeia*.

Mrs. R. P. Adams, Public Policy and Legislation Chairman, had no report.

Three delegates from the organization attended the Ninth District Auxiliary meeting at Connahaynee Lodge, Tate Estates.

A report was sent of the activities for the past six months.

A copy of the Constitution and By-Laws of the local unit was placed in the scrapbook and a copy filed in State Archives.

A news letter and questionnaire had been sent to the State Department.

Mrs. Ross had charge of the program and gave a very interesting paper on "Personal Hygiene."

The hostess served delicious sandwiches, hot chocolate with whipped cream and salted nuts.

—Winder News, WINDER, GA.

#### NEWS ITEMS

The Richmond County Woman's Auxiliary met at the Nurses' Home, Augusta, on January 14th. Officers were elected for the ensuing year as follows: President—Mrs. Ralph H. Chaney; First Vice-President—Mrs. W. W. Battey; Second Vice-President—Mrs. Geo. Traylor; Third Vice-President—Mrs. Robt. L. Rhodes; Corresponding Secretary—Mrs. Robert B. Crichton; Recording Secretary—Mrs. H. P. Harrell; Treasurer—Mrs. A. C. Wade; Parliamentarian—Mrs. Wm. C. Kellogg.

Mrs. G. Hugo Johnson, Savannah, President of the Chatham County Woman's Auxiliary, entertained the Flying Squadron of the Georgia Congress of Parents and Teachers Association at her home on January 21st.

The American Nurses' Association, 450 Seventh Avenue, New York City, announces some of the important subjects which will be discussed at its biennial meeting to be held in Washington, D. C., April 22 to 27, inclusive.

Some of the topics are: *What Does the Public Expect from Nursing*, *How Can the Public Participate in Bringing This About*, *The Economic World, Community Life, Changes in the Field of Education*, *The Changing Order and Nursing*, *Health Aspect of Social Legislation*, *Legislation and the Future of Nursing*, *The Changing Order of Hospitals*, and *The Nurse as Interpreter of the Hospital to the Community*.

#### FIFTH DISTRICT MEDICAL SOCIETY MEETS ACADEMY OF MEDICINE, Atlanta MARCH 22, 1934

##### PROGRAM

6:30 P.M.

A buffet supper will be served by members of the Fifth District Medical Society to members and their wives of the Fulton County Medical Society and visitors.

7:15 P.M.

##### I. Address of Welcome.

Dr. Marion C. Pruitt, President of the Fulton County Medical Society, Atlanta.

##### II. Response to Welcome.

Dr. Charles H. Richardson, President of the Medical Association of Georgia, Macon.

##### III. *The Relationship of Health Preservation to Genito-Urinary Symptoms.*

Dr. Edgar G. Ballenger, Former Professor of Genito-Urinary Surgery, Emory University School of Medicine, Atlanta.

Discussion: Dr. Samuel J. Sinkoe, Atlanta.

##### IV. *Nasal Accessory Sinuses as Foci of Infection.*

Dr. Louis C. Rouglin, Chief of Visiting Staff of Ear, Eye, Nose and Throat Department, Grady Hospital, Atlanta.

Discussion: Dr. William C. Warren, Jr., Atlanta.

##### V. *Breast Feeding and Infection—A Review of Twenty Thousand Cases.*

Dr. Clifford G. Grulee, Editor of American Journal of Diseases of Children, and Secretary of American Academy of Pediatrics, Chicago, Ill.

Introduction: Dr. W. A. Mulherin, Augusta.

Discussion: Dr. L. D. Hoppe, Atlanta.

##### VI. *The Influence of Simultaneous Ligation of the Veins on the Incidence of Gangrene Following Arterial Obstruction.*

Dr. Barney Brooks, Professor of Surgery, Vanderbilt University School of Medicine, Nashville, Tenn.

Introduction: Dr. Dan C. Elkin, Atlanta.

Discussion: Dr. Joseph C. Read, Atlanta.

##### VII. New Business.

##### VIII. Adjournment.

A luncheon will be given by the Academy of Pediatrics in honor of Dr. Clifford G. Grulee at the Capital City Club, at 12:30 P.M. All interested in pediatrics are invited to attend.

Officers of the Society are:

President .....	Dr. Joseph Yampolsky, Atlanta
Vice-President .....	Dr. Geo. W. Fuller, Atlanta
Secretary-Treasurer .....	Dr. H. H. Askew, Atlanta
Ass't Sec'y-Treas. ....	Dr. Edgar Boling, Atlanta
Councilor .....	Dr. W. A. Selman, Atlanta
Vice-Councilor .....	Dr. Marion C. Pruitt, Atlanta

## GEORGIA DEPARTMENT OF PUBLIC HEALTH

T. F. ABERCROMBIE, M.D., *Director*

### TYPHUS FEVER CONTROL

The time has come when Typhus, or Brills fever, must be recognized as one of the major public health problems of Georgia and possibly contiguous states. From 48 cases reported in 1928, the disease has increased to 618 in 1933. From an incidence of 127 cases, or 4.3 per 100,000 population in 1931, the number of cases increased to 308, or 10.4 per 100,000 population in 1932. Last year 618 cases, or 20.7 per 100,000 population, were reported to the State Health Department. It may be seen that the number of cases had doubled annually since 1931.

The disease has shown a tendency not only to increase, but to spread since 1931. During 1930 and 1931 Savannah and Chatham County furnished about half of the cases reported. In 1932, 117 cases were reported from Chatham County, which was the only county up to that time to show a case rate about 100 per 100,000. In 1933 a number of counties showed case rates in excess of 100 per 100,000 population, and the greater number of these counties are located in southwest Georgia, particularly in the heavy peanut-producing area, where the food supply for rats is considerably augmented, and where the Norway or wharf rat has shown a tendency to over run the country.

It appears that as the disease increases there is a tendency toward the development of more serious complications and concomitant higher fatality rates. In 1932 the fatality rate per cent was 2.6, and in 1933, 4.6. In this connection it might be stated that the disease is capable of developing serious epidemic proportions, whenever it is passed through the medium of and spread through the body louse. Under such conditions, mortality rates may reach as high as 40 or even 50 per cent.

The State Department of Health has viewed the spread of typhus during the past two years with increasing apprehension, which came to a climax last summer at the beginning and throughout the typhus season, which extended into the fall and winter months. The gravity of the situation became still more apparent when an appeal for assistance came to the Department from the Tri-County Medical Society of Calhoun, Early and Miller counties. The appeal stated that typhus fever had recently increased to the point that it must be regarded as a major health problem in those counties, and since rats and rat fleas harbor and transfer the

disease, could not some plan be worked out and assistance given in the destruction of the Norway rat, which infested the countries, and also caused great economic loss? The State Epidemiologist, Dr. D. L. Seckinger, immediately investigated conditions and consulted with members of the profession in Calhoun, Early and Randolph counties. His report indicated not only an increase in these counties, but in many counties of south Georgia, particularly in those areas where peanuts are grown extensively, in addition to the ordinary grain crops.

In August, Mr. Harry Hopkins, Federal Director of the Civil Works Administration, consulted with the Surgeon General of the United States Public Health Service, and it was decided to set up a Federal Typhus Control project. About this time the Biological Survey took steps to initiate rat extermination campaigns throughout the state, and through agreement their problem of rodent control was definitely connected with the United States Public Health Service Typhus Fever Control program, so that two Federal agencies are at present co-operating with the State Health Department and the State Department of Entomology. Dr. T. F. Abercrombie has been designated by the Surgeon General as State Director of Typhus Control, and Dr. D. L. Seckinger as Medical Officer in Charge. Mr. James Silver is directing the work for the Biological Survey, and Mr. Carlyle Carr is the Biological Survey field representative.

The control program has assumed several phases:

1. A red squill poisoning and trapping program in 71 South Georgia counties, where the disease is most prevalent, is under way by the Biological Survey.
2. Rodent and ectoparasite surveys of rats are now being conducted in Savannah, Brunswick and Atlanta, under the direction of the U. S. Public Health Service and the State Department of Health.
3. The State Department of Health, in accordance with instructions from the Public Health Service, is now in the process of organizing mobile units for typhus control. Foci of the infection will be determined through epidemiological study, and at such foci the mobile unit will endeavor to assist in:
  - (a) The planning and supervision of rat proofing procedure.
  - (b) Elimina-



tion of rat harborage. (c) Extermination of rodents and insects in proven infested areas. (d) The promotion of adoption of rat-proofing ordinances to apply to all new construction.

It is hoped and believed that the control program is sufficiently comprehensive to have its telling effect upon typhus in the near future. The co-operation of the physicians of the State is earnestly solicited in this work. It will also help greatly if physicians will report their cases regularly and as early as possible, as this will assist in the establishment of definite foci from which the disease spreads.

#### COUNTIES REPORTING FOR 1934

##### *Hall County Medical Society*

The Hall County Medical Society announces the following officers for 1934:

President—L. W. Hodges, Gainesville.  
Vice-President—H. K. Phillips, Cleveland.  
Secretary-Treasurer—W. R. Garner, Gainesville.  
Delegate—B. B. Davis, Gainesville.  
Alternate Delegate—Jesse L. Meeks, Gainesville.  
Censors—C. D. Whelchel, C. J. Wellborn and W. R. Garner.

##### *Hancock County Medical Society*

The Hancock County Medical Society announces the following officers for 1934:

President—Horace Darden, Sparta.  
Secretary-Treasurer—H. L. Earl, Sparta.

##### *Habersham County Medical Society*

The Habersham County Medical Society announces the following officers for 1934:

President—R. B. Lamb, Demorest.  
Vice-President—F. C. Whelchel, Alto.  
Secretary-Treasurer—O. N. Harden, Cornelia.  
Delegate—R. B. Lamb, Demorest.  
Alternate Delegate—W. H. Garrison, Clarksville.  
Censors—J. B. Jackson, M. F. Haygood and W. H. Garrison.

##### *Whitfield County Medical Society*

The Whitfield County Medical Society announces the following officers for 1934:

President—G. L. Broadrick, Dalton.  
Vice-President—D. L. Wood, Dalton.  
Secretary-Treasurer—H. J. Ault, Dalton.  
Delegate—J. C. Rollins, Dalton.  
Alternate Delegate—D. L. Wood, Dalton.  
Censors—E. O. Shellhorse, F. B. Easley and J. H. Steed.

##### *Gordon County Medical Society*

The Gordon County Medical Society announces the following officers for 1934:

President—W. R. Barnett, Calhoun.  
Secretary-Treasurer—Z. V. Johnston, Calhoun.  
Delegate—Z. V. Johnston, Calhoun.

##### *Screven County Medical Society*

The Screven County Medical Society announces the following officers for 1934:

President—Jno. C. Cail, Sylvania.  
Vice-President—W. H. Doster, Rocky Ford.  
Secretary-Treasurer—W. H. Bennett, Sylvania.

##### *Sumter County Medical Society*

The Sumter County Medical Society announces the following officers for 1934:

President—J. T. Stukes, Americus.  
Vice-President—A. C. Primrose, Americus.  
Secretary-Treasurer—R. C. Pendergrass, Americus.  
Delegate—S. P. Wise, Americus.  
Alternate Delegate—J. W. Chambliss, Americus.  
Censors—E. B. Anderson and B. T. Wise.

#### NEWS ITEMS

Dr. Frank K. Boland, Atlanta, has been elected Chairman of the Board of Stewards of the Trinity Methodist church.

Dr. C. B. Upshaw, Atlanta, has been elected President of the Piedmont Hospital Staff.

The Georgia Medical Society held its regular meeting on January 23rd. Dr. M. J. Dorcas with the Wisconsin Alumni Research Foundation, read a paper entitled *Direct Irradiation of Milk*; Dr. E. J. Whelan, Savannah, gave report of two cases, *Indication for Vaginal Hysterectomy*.

The Randolph County Medical Society met at Carnegie Library in Cuthbert, on February 1st. Memorial services were held for the late Dr. G. Y. Moore. Speakers on the program were Dr. (Mrs.) A. McD. Saurez, Cuthbert; Dr. C. K. Sharp, Arlington, and Dr. J. C. Patterson, Cuthbert.

Dr. M. F. Haygood, Superintendent, State Tuberculosis Sanatorium, Alto, spoke at the Georgia Medical Society Hall, 612 Drayton Street, Savannah, before the Chatham-Savannah Tuberculosis Association's annual meeting held on January 11th.

Dr. Geo. A. Traylor, Augusta, has been elected to the Richmond County Board of Health to fill the unexpired term of Dr. H. W. Shaw, deceased.

The Spalding County Medical Society met at the R. F. Strickland and Son Memorial Hospital, Griffin, on January 16th. Wives of all the members of the society were invited to attend. Dinner was served in the dining hall.

The Telfair County Medical Society met at Lumber City on January 9th. Dr. O. F. Collum, McRae, read a paper entitled *Acidosis*.

Dr. J. L. Campbell, Dr. Jas. J. Clark and Dr. Dan Y. Sage, all of Atlanta, spoke before a meeting of the Atlanta Federation of Trades at the Labor Temple, Atlanta, on January 24th in opposition to a proposal for the city of Atlanta to borrow a quarter

of a million dollars from the Federal government to enlarge Steiner Ward at Grady Hospital.

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, on February 1st. Dr. T. C. Davison and Dr. Geo. L. Walker, Atlanta, gave a preliminary report of a case of *Total Thyroidectomy in Chronic Heart Failure*; Dr. Alton V. Hallum, Atlanta, gave a case report, *Arsenic Poisoning, An Unusual Eye Complication*; Dr. Jas. K. Fancher, Atlanta, gave a clinical talk on *History of Endocrinology*; Dr. Dunbar Roy, Atlanta, read a paper entitled, *Epiphora In Infants and Its Treatment*. Discussions were led by Dr. Stacy C. Howell, Dr. Wm. O. Martin and Dr. R. G. McAliley, all of Atlanta.

The next meeting of the Georgia Conference on Social Work will be held at Macon, April 16, 17, 18, 1934. All social workers and friends of social workers are invited.

The Thirtieth Annual Congress on Medical Education, Licensure and Hospitals was held at the Palmer House, Chicago, February 12th and 13th.

The Atlanta Chamber of Commerce announces the selection of Atlanta physicians to serve through 1934 on its Health Committee as follows: Dr. T. F. Abercrombie, Dr. Marion T. Benson, Dr. W. Troy Bivings, Dr. Allen H. Bunce, Dr. F. Phinzy Calhoun, Dr. T. C. Davison, Dr. W. S. Elkin, Dr. Howard Hailey, Dr. J. P. Kennedy and Dr. Marion C. Pruitt.

Dr. Herman N. Bundesen, President, Board of Health of Chicago, writes further of the developments in the outbreak of amebic dysentery which apparently had its origin in Chicago as follows: "Our efforts to contact all individuals with any suspicious symptoms have continued unabated. Up to date (Jan. 22, 1934), we have discovered 718 definitely diagnosed cases, involving 201 cities, with a total of 41 deaths shown to be due to amebic dysentery. We have found 1019 carriers of the *Endameba histolytica*, half of whom came from two hotels."

The Southern Surgical Association will hold its next meeting at Sea Island, December 11, 12, 13, 1934.

Mrs. Shephard Krech, New York City, President of the Maternity Center Association, announces that May 13th is to be observed by women's clubs, men's clubs, medical societies, chambers of commerce, other professional and civic groups in community efforts throughout the nation to "Make Motherhood Safe for Mothers."

The New York Polyclinic Medical School and Hospital, New York City, featured lectures at the institution as follows: January 10th, *Certain Considerations in Pneumonia in Children* by Dr. Walter H. Levy; February 6th, *Diagnosis and Treatment of Endocrine Conditions in Infants and Children* by Dr. Murray B. Gordon, Professor of Clinical Pediatrics

at the Long Island College of Medicine; February 14th, *Lobar Pneumonia* by Dr. Russell L. Cecil, Professor of Internal Medicine at the New York Polyclinic Medical School and Hospital; February 23rd, *Atelectasis as a Common Post-Operative Condition* by Dr. Jas. S. Edlin.

Dr. and Mrs. C. A. Witmer, Waycross, entertained the members of the Ware County Medical Society at dinner in their home on February 7th. The routine business of the society was transacted. Dr. D. M. Bradley, Waycross, read a paper entitled *Treatment of Menstrual Disturbances*.

The Fourth District Medical Society met at LaGrange, February 7th. Titles of papers on the scientific program were as follows: *Tuberculosis and Its Surgical Treatment*, Dr. R. L. Carter, Thomaston; *The Duty of Obstetrician to the Infant During the First Year of Life*, Dr. W. P. Phillips, LaGrange; *Tempering the Mind to the Shorn Lamb*, Dr. Enoch Callaway, LaGrange; Address by Dr. Allen H. Bunce, Atlanta, Secretary-Treasurer of the Association. The next meeting of the society will be held at Warm Springs on August 1st.

The Tenth District Medical Society met at the University Hospital, Augusta, February 14th. The scientific program consisted of the following titles: *Surgical Clinic*, Dr. F. L. Lee and staff of the University Hospital, Augusta; *Gynecological Clinic*, Dr. W. H. Goodrich, Augusta; *Orthopedic Clinic*, Dr. H. M. Michel, Augusta; *Eye, Ear, Nose and Throat Clinic*, Dr. J. M. Hull, Augusta; *Urologic Clinic*, Dr. J. R. Robertson, Augusta; *Medical Clinic*, Dr. V. P. Sydenstricker, Augusta; *Pediatric Clinic*, Dr. C. M. Burpee, Augusta; *Diabetic Clinic*, Dr. J. D. Gray, Augusta; *Pathologic Demonstration*, Edgar R. Pund, Augusta; *Self Mutilation*, Dr. W. R. Houston, Augusta. Luncheon was served in the main dining room of the hospital.

The First District Medical Society will meet at Statesboro on March 21st. Dr. Allen H. Bunce, Atlanta, will read a paper entitled *The Treatment of Chronic Infectious Arthritis*.

The Macon Medical Society met on February 6th. Dr. W. C. Boswell and Dr. J. I. Hall, both of Macon, read a joint paper on *Infantile Paralysis—From Medical and Orthopedic Standpoints, with Particular Reference to Cases Treated in Macon*.

The Georgia Medical Society, Savannah, at a call meeting held on February 7th, endorsed the Federal Emergency Relief Administration and its procedure for medical relief of the unemployed. Resolutions adopted by the society and wired to Miss Gay B. Shepperson, Atlanta, State Administrator, were as follows: "At a special meeting of the Georgia Medical Society held tonight the following resolutions were adopted: BE IT RESOLVED, that the Georgia Medical Society go on record as approving of and support-



ing the medical and nursing program that is now in operation under this administration. BE IT FURTHER RESOLVED, that we wish to go on record in opposition to this program being turned over to any other agency in Savannah. BE IT FURTHER RESOLVED, that the Health Center, the Chatham County Public Health Service, and the Chatham-Savannah Tuberculosis Association be supported in the work which they are now doing by providing nurses to serve in their regular daily work. These nurses to be drawn from the register in the Relief Administration files." On February 8th, Dr. O. W. Schwalb, Secretary-Treasurer of the Georgia Medical Society, wrote to Miss Shepperson as follows: "In explanation of my night letter to you on the 7th, I wish to state that a special meeting of the Georgia Medical Society was called for the purpose of protesting against any change in the present Federal Relief program in Chatham county. There has been a wide difference of opinion as to a proposed change that is to occur on February 9th. The administration has been almost universally satisfactory to the medical profession of this city, and under the able administration of Mr. W. H. Artley, it will continue to be so. With the exceptions of a few persons interested in a change, there is no desire whatsoever to have it made."

The Trustee-Staff of Grady Hospital, Atlanta, held its annual meeting in the dining room of the white nurses' home on February 13th. The program consisted of an address by Hon. Jas. L. Key, Mayor of Atlanta; address by Hon. Geo. F. Longino, Chairman of the Fulton County Board of Commissioners; annual report by Dr. Jack C. Norris, Secretary; report of Mr. J. B. Franklin, Superintendent; address by Dr. C. W. Strickler, retiring President of the Staff. Officers were elected for the ensuing year.

Dr. Guy G. Lunsford, Millen, Jenkins County Commissioner of Health, in his annual report to the Chairman of the Jenkins County Board of Health, states that "Not a case of diphtheria or typhoid fever was reported during the year. There has not been a case of smallpox in two years. There has been no epidemic during the year, although the total of diseases reported was increased, caused by a survey of school children for hookworm."

The Tri-State Dietetic Association held its fifth annual meeting at the Piedmont Hotel, Atlanta, on February 17th. Dr. Jas. E. Paullin, Atlanta, read a paper entitled, *Diet in Relation to Diabetes*; Dr. M. Hines Roberts, Atlanta, *Infant Feeding*; Dr. R. S. Leadingham, Atlanta, *Casting Our Cares on the Colon*. Miss Leila Bunce, Atlanta, Councilor of the American Home Economics Association, presided at the morning session.

Dr. Richard Shatzki, Boston, gave a series of lectures at the Academy of Medicine, Atlanta, February 5th to 9th, inclusive. The lectures were illustrated and of special interest to internists, surgeons and roentgenologists.

The staff meeting of the Crawford W. Long Memorial Hospital, Atlanta, was held on February 8th. The program consisted of a discussion of mortalities; *Presentation of Case* by Dr. Linton Smith and Dr. M. P. Pentecost; *Discussion of Trichomonas Vaginalis*, Dr. Ed H. Greene.

A portrait of the late Dr. Edward Bates Block was presented to Emory University School of Medicine, Emory University, on February 9th. Dr. Lewis M. Gaines, Atlanta, Chairman of the Staff of Emory University Hospital, presided; Dr. Richard B. Wilson, Atlanta, introduced Dr. Charles N. B. Camac; Dr. Camac made the "Presentation Address"; the portrait was unveiled by Julia Lowry Block and Bates Block, Jr.; "Acceptance of the Portrait" by Dr. Russell H. Oppenheimer, Dean of Emory University School of Medicine.

The State Board of Health announces that a campaign to employ 10,000 people and that an expenditure of \$1,250,000 will be made in 71 counties of south Georgia, 39 counties in Alabama and west Texas, to exterminate rats in an effort to prevent typhus fever. *The Arlington Courier*, Arlington, states: "The movement to check the rat population originally had its beginning with the Tri-County Medical Society, composed of Calhoun, Early and Miller counties."

The Muscogee County Medical Society met at the City Hospital, Columbus, on February 8th. Dr. C. A. Peacock, Columbus, read a paper entitled, *Diseases of the Nose and Throat in Relation to Systemic Disease*; Dr. J. B. Thompson, Columbus, *Diseases of the Ear and Mastoid in Relation to Systemic Disease*; Dr. F. B. Blackmar, Columbus, *Edema of the Optic Disc—Illustrated*. Plans are being perfected for a physicians "Medical Credit Bureau."

#### OBITUARY

Dr. Robert Stephen Reid, Savannah; member; University of Pennsylvania School of Medicine, Philadelphia, 1898; aged 62; died suddenly at his home on January 4, 1934. He was born and reared in Savannah. Dr. Reid practiced medicine in Savannah for thirty-five years. He was an associate of the late Dr. M. F. Dunn and Dr. Thos. J. Charlton and was on the staff of St. Joseph's Hospital for many years. Dr. Reid held the esteem and confidence of hundreds of acquaintances by his striking personality and sincerity in all his undertakings. He was a member of the Georgia Medical Society, American Medical Association and the St. John Baptist Parish. Surviving him are one sister, Miss Mary Reid; two nieces, Misses Catherine and Mary Broderick, three nephews, E. F. Broderick, Jr., Dr. J. Reid Broderick, and Robert S. Broderick, all of Savannah. Funeral services were conducted from the residence, followed by services in the Cathedral of St. John the Baptist. Burial was in Bonaventure cemetery.

*Dr. William J. Greene*, Ringgold; member; Chattanooga Medical College, Chattanooga, Tenn., 1896; aged 63; died at his home on January 8, 1934. He had practiced medicine in Ringgold and Catoosa county for seventeen years. By his pleasing personality and cheerful disposition he endeared himself to all the people of the community. Dr. Greene was charitable in his work and never refused to answer a call on account of any inability of the patient to pay. He was progressive and took an active interest in the welfare of his community. Dr. Greene served as councilman of his home town and on the board of education. He was a member of the Whitfield County Medical Society, F. & A. M., and the First Baptist church. Surviving him are his widow; one daughter, Mrs. Raymond Gibson, Chattanooga, Tenn.; three sons, Ralph and W. J. Greene, Jr., Ringgold, and Charles Greene, Chattanooga. Rev. J. L. Hall conducted the funeral services from the First Baptist church. Interment was in the Anderson cemetery. Members of the Whitfield County Medical Society formed an honorary escort.

*Dr. Leonard J. Pharr*, Conyers; University of Georgia Medical Department, Augusta, 1901; aged 52; died at a private hospital in Atlanta on January 14, 1934. He had practiced medicine in Rockdale county for more than thirty years. Dr. Pharr had endeared himself to hundreds of people by his kindness and was known as a successful physician. Surviving him are his widow, two sons, Marion N. and Keaton S. Pharr, Gainesville; one daughter, Miss Sarah Jean Pharr, Conyers. Funeral services were conducted from the residence of Dr. and Mrs. J. R. Sams at Covington. Interment was in the village cemetery at Newborn.

*Dr. Fred R. Wallace*, Cordele; member; University of Georgia Medical Department, Augusta, 1879; aged 77; died at a private hospital in Milledgeville on January 13, 1934. He practiced medicine in Cordele and surrounding community for more than forty years. Dr. Wallace did a great amount of charity practice. People loved him for his great worth as a public-spirited citizen and for his efforts for the betterment of conditions in every walk of life. He was a member of the Crisp County Medical Society, Masons, Shrine and the Baptist church. Surviving him are two grandchildren, Fred R. Wallace, of Missouri; Miss Catherine Wallace, Statesboro. Funeral services were conducted by Rev. W. L. Robuck from the chapel of Dekle's Funeral Home. Burial was in Sunnyside cemetery.

*Dr. Albert Le Roy Crittenden*, Shellman; member; Atlanta College of Physicians and Surgeons, Atlanta, 1902; aged 54; died suddenly from gunshot wounds on the golf links at Shellman on January 25, 1934. He was born and reared in Shellman, spent his entire life there, except for the time he attended Gordon Institute at Barnesville and a medical school in Atlanta. Dr. Crittenden served on the Board of Edu-

cation of Shellman for a number of years. He was a highly respected and useful citizen. He had an extensive practice and did a great deal of charity work. Dr. Crittenden was eager and energetic at all times to promote the welfare of his community and spent much time for such a purpose. His usefulness was shown by the hundreds of warm personal friends. He was a member of the Randolph County Medical Society, American Medical Association, and the Shellman Methodist church. Surviving him are his widow, three daughters, Mrs. Walter Adams, Weston; Misses Emily and Anna Crittenden, Shellman; one son, Albert L. Crittenden, Jr., Darien.

*Dr. William B. Floyd*, Rome; member; Emory University School of Medicine, Emory University, 1891; aged 65; died suddenly in his office on January 18, 1934. He began practice at Curryville, moved to Rome where he had practiced for more than twenty years. Dr. Floyd was a prominent physician and had an extensive practice in Rome and Floyd county. Hundreds of friends held him in high esteem.

#### DOCTOR LOGAN THOMAS

*Resolutions by*

#### TERRELL COUNTY MEDICAL SOCIETY

In the death of Dr. Logan Thomas, late Secretary-Treasurer of the Terrell County Medical Society, the Society has lost a valuable, energetic, painstaking executive; and the people of the county a helpful counselor, friend and physician.

For more than twenty-five years he has labored as a friend and physician to the people of a part of three counties. By his winning personality and loyal devotion to professional duties, he has brought comfort in health and in sickness to thousands of people. In the hearts of his clientele, his loss can not be filled; and we, his co-workers and associates, sympathize with them in our mutual loss.

THEREFORE, the Society desires to express its deep appreciation for his worth, faithful and efficient services. We deplore his death and extend to his bereaved family our heartfelt sympathy in their great loss.

BE IT RESOLVED, that copies of this resolution be sent to the family of Dr. Thomas, the Dawson News, and the Journal of the Medical Association of Georgia.

Respectfully submitted,

LUCIUS LAMAR, M.D.

STEVE P. KENYON, M.D.

January 15, 1934.

*Committee.*

#### COMMUNICATIONS

##### *Public Health Nursing*

##### *To the Editor:*

We have been granted an allotment, through the Civil Works Administration, for a public health nursing project. Ten nurses will be detailed to do tuberculosis follow-up work, the State having been divided into ten districts for this purpose. Besides the follow-



up work, the nurses will organize clinics for the State Board of Health tuberculosis field unit.

The primary object in this campaign is to break the chain of spread of tuberculosis in the family caused by contact. This can be done only by education in the proper methods of prevention. The nurses will have definite instructions not to visit any case of tuberculosis or family without first consulting the family physician. She will have in her possession a record of every case of tuberculosis that has been reported for the past two or three years, with the name of the physician reporting it. She will also have the name of every patient discharged from the State Tuberculosis Sanatorium at Alto, together with the name of the physician.

I am writing to request your sympathetic cooperation in this gigantic piece of tuberculosis control work. You will find that the nurse will only want to be of constructive help to you and your patients. If there are cases of tuberculosis you do not desire the nurse to visit, she will have definite instructions to follow your wishes.

In the past six years, our tuberculosis death rate has been reduced twenty-seven per cent. We are hoping through this intensive piece of work to prevent the spread in families, thereby making a further significant reduction in the death rate.

There also are a number of child hygiene nurses that have been assigned to us by the Civil Works Administration. You will get a separate letter regarding these nurses going into your territory.

T. F. ABERCROMBIE, M.D., *Director,*  
*Department of Public Health*

Atlanta, Ga., Feb. 6, 1934.

#### SATISFIED AUTO POLICYHOLDER

Mr. Jas. W. Morton, Jr., Director,  
State Farm Mutual Automobile Ins. Co.,  
Atlanta, Georgia.

Dear Mr. Morton:

On September 18, 1933, I took out insurance with your agent here, Mr. F. M. Blackwell, on my Chevrolet automobile, with the State Farm Mutual Automobile Insurance Company, Bloomington, Ill., and I took full coverage since I can get and carry full coverage for approximately the same premium that I can carry personal liability in the old line companies. Since I have had this insurance it seems that it has been my misfortune to have a number of little accidents, and as it so happened every one of the accidents was covered by your collision insurance.

The cost of repairs to my car caused by these accidents was \$128.75, and all adjustments were made promptly and to my entire satisfaction.

I appreciate particularly the promptness with which they dispatch business, and the further fact that they pay on the basis of any small damage, whereas so many of the companies do not make settlement for breakage or damage under \$25.00.

I am operating my automobile today and after it has gone through all the accidents and been repaired by your experts, it runs and looks as good as new. I am writing you this letter voluntarily to show my appreciation of the services rendered me. You are at liberty to use this letter in any way you see fit.

Very sincerely yours,

LEE F. BURTZ, *Clerk Superior Court,*  
Canton, Ga., Feb. 5, 1934. *Cherokee County.*

#### MEAD'S 10 D COD LIVER OIL IS MADE FROM NEWFOUNDLAND OIL

Professors Drummond and Hilditch have recently confirmed that for high vitamins A and D potency, Newfoundland Cod Liver Oil is markedly superior to Norwegian, Scottish and Islandic Oils.

They have also shown that vitamin A suffers considerable deterioration when stored in white glass bottles.

For years, Mead's Cod Liver Oil has been made from Newfoundland Oil. For years, it has been stored in brown bottles and light-proof cartons.

Mead's 10 D Cod Liver Oil also enjoys these advantages, plus the additional value of fortification with Mead's Viosterol to a 10 D potency. This ideal agent gives your patients both vitamins A and D without dosage directions to interfere with your personal instructions. For samples write Mead Johnson & Company, Evansville, Ind., U. S. A. Pioneers in Vitamin Research.

#### MERCK & COMPANY—DR. EUGENE MAIER

The Merck Institute of Therapeutic Research, Rahway, New Jersey, announces the appointment of Dr. Eugene Maier as Chief Bacteriologist.

Dr. Maier is a graduate of the University of Tuebingen, Wuerttemberg, Germany and completed his studies at the University of Erlangen, Germany.

Dr. Maier was associated with the Rockefeller Institute of New York as Research Assistant from 1926 to 1930. Since 1931, up to the time of becoming associated with Merck & Co., Inc., Dr. Maier has been at Bellevue Hospital, New York, in the department of pathology, as bacteriologist for the Tuberculosis Division of Columbia University.

#### MR. TAXPAYER GOES SHOPPING

By Beulah Burhoe, National Tuberculosis Association—Mr. Taxpayer had been in the habit of accepting his government services casually. City and county officials relieved him of the tedious job of deciding what kind of public service he was to have and of allocating the tax money. All Mr. Taxpayer had to do was to send his check once a year when the tax bill came. Of late, however, Mr. Taxpayer has taken notice of his tax bills, probably because his pocketbook was shrinking. He thought it best therefore to go himself to the government's store to see what he was buying. A pig in a poke is a poor bargain when times are hard.

He found some luxury goods and noticed certain wastes, but on the whole, he was impressed by the fine display on the shelves of necessary public services. Almost the entire ground floor was occupied by the neat exhibit of the Bureau of Highways, with miles and miles of beautiful concrete roads and staunch bridges. The salesman recited the benefits of road building. "Yes, it is expensive, but you can always count on getting your money's worth." Mr. Taxpayer really believed in good highways, so he reached in his pocket and paid his share—\$3.80, an amount which is matched three times by his state and national governments.

Next came the Police Department with its fine uniformed guardsmen. Surely it would not be intelligent to economize on such a necessary service as this. Gladly Mr. Taxpayer paid \$4.52.

At the next counter was a fine array of shining fire-apparatus and those brave men whose vigilance guarantees us nights free from the menace of fire. "Surely this is cheap at any price," and Mr. Taxpayer paid his bill, which was \$3.32.

One of the most alluring exhibitions was that of the public schools. Fine tall buildings, playgrounds, trained teachers. Certainly the welfare of the child is undebatable. Mr. Taxpayer willingly gave up \$16.17.

And so throughout the store. Each department chief reinforced his sales talk with diagrams and figures to such potent effect that Mr. Taxpayer found himself on the way to the elevator, believing his accounts paid up and confident that his money was well spent.

Just as he was about to leave, a modest-looking man presiding over a little array of graphs and test tubes motioned to him. He proved to be the head of the department of public health. Mr. Taxpayer had all but forgotten. He paused to pay his toll, a mere pittance, fifty cents. He had never paid much attention to this kind of work. Somehow this quiet man awakened his interest. Could he tell him what the department had been able to do with a mere fifty cents a year? "Why," said Mr. Taxpayer, "I spend \$30 a year on the things we need in times of sickness, doctors, dentists, nurses, hospitals and medicines. Have you really been able to accomplish anything on such a puny budget?" With growing amazement he learned that—

From 1911 to 1931 the average length of life in the United States increased seven years.

The infant death rate was only 58 per 1,000 in 1932, but it was 170 in 1900.

The death rate of the four principal communicable diseases of childhood has been reduced 60 per cent in ten years.

In 1932, relatively only one-third as many people died of tuberculosis as in 1900.

Fifty cents goes a long way, thought Mr. Taxpayer; would a little more be better? Then he learned

to his horror that in spite of all these wonderful achievements—

Tuberculosis is still the greatest single cause of death among young people from 15 to 25.

There are nearly 700,000 people in the United States today sick with tuberculosis and this disease is preventable.

"But," interrupted Mr. Taxpayer, "why is this horrible waste allowed to go on? Can't something be done about it?"

"Certainly," the health officer replied. "All we need is public support. We have the knowledge to win in the future even greater battles in the field for health. You, yourself, almost forgot us."

That people may not forget what public health does for them, a campaign has been organized to begin throughout the country April 1 under the slogan: "Tuberculosis Robs You, Public Health Protects You."

These past years of worry, strain, underfeeding and neglect of personal health have left deep wounds. That heavy scars may not remain, especially among young children, health recovery must accompany economic recovery.

Individuals acting alone cannot safeguard the milk supply, provide adequate school and visiting nurse service, protect children from communicable diseases such as diphtheria, measles and tuberculosis. The degree to which the public health work of any locality meets its needs is not a matter of haphazard guess work. There are certain standards of safety set by health authorities, which can be applied to every community.

Tuberculosis associations are specially interested in this campaign because the nature of tuberculosis is such that its control is responsive to every improvement in public health generally. Everything that is done to safeguard health, helps to reduce tuberculosis. The object of the campaign is to bring home to the individual citizen the value of the whole public health structure of the community, as well as to inform them as to special needs which should be met, if the depression is not to effect a depletion of our vital resources.

#### WHO WANTS TO BE A HEALTH OFFICER?

By Dwight Anderson, National Tuberculosis Association—Somebody once published a survey of a hundred successful men and found that ninety per cent of them wished they had picked out some other pursuit than the one in which they had attained pre-eminence. The explanation given by the writer of the article was that these men saw only the interesting phases of the other fellow's pursuit, and knew little of the undesirable factors. "Those hills are greenest," runs an old saying, "which are farthest away."

When certain educators connected with Ohio State University recently wished to know more about the type of courses they should be offering prospective health officers, they decided to make an exhaustive



investigation to find out just what were the duties of such officials in the state. They found that the number of activities totalled 3,934. Small boys who see a man tacking up smallpox signs and envy his nice job, should take warning.

#### NEWS ITEMS

Dr. and Mrs. J. D. Martin, Jr., Atlanta, announce the birth of a son, John Daniel Martin, III.

Dr. C. H. Pinson, Hapeville, has resumed the practice of medicine after an illness of several months' duration.

Dr. Marion C. Pruitt, Atlanta, President of the Fulton County Medical Society, was host to the officers and chairmen of the committees of the society on January 29th at the Henry Grady Hotel.

Dr. W. C. Lyle, with offices in the Candler Building, Atlanta, is sick and being treated in the Carrollton Clinic, Carrollton.

#### MARRIAGE

Dr. Edgar F. Fincher, Jr., Atlanta, to Miss Helen Nichols, Atlanta, February 10, 1934; Dr. Louie D. Newton officiated. On their return from a wedding trip, they will be at home at 169 Peachtree Circle, Atlanta.

#### PHYSICIANS' EXPANSION BUREAU

In this issue of the Journal appears one of a series of health talks prepared by the Physicians' Expansion Bureau for use in an educational campaign to foster a closer relationship between doctors and the public.

These brief messages emphasize the importance of periodic consultations with the family physician and regular physical examinations. They are designed also to counteract the influence of advertisements of nostrums and cure-alls.

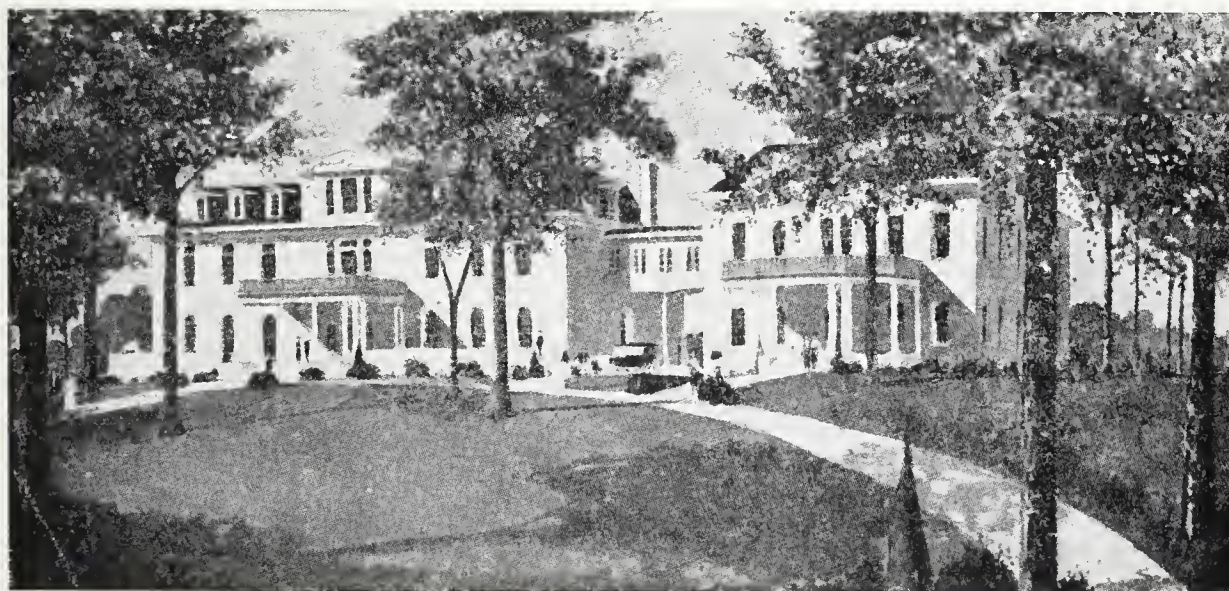
In every city visited, representatives call on the leading druggists who specialize in prescription work to outline the scope of the service. They interview as many physicians as possible to secure their suggestions and recommendations as to the druggist who would carry out the plan most successfully.

The complete series of health talks are then released to one of the druggists recommended by the doctors and scheduled to appear in the local newspapers.

The Physicians' Expansion Bureau expects to list each month in the Journal the names of druggists who are taking part in this movement. The cooperation of physicians with these druggists will be appreciated by the bureau.

Physicians who are interested in having the plan introduced in their communities may get in touch with the bureau through this publication.

L. C. THOMPSON, *Director*



*Completely equipped for the care and treatment of nervous and mild mental disorders, drug and alcoholic addictions, internal medical cases and general invalidism.*

## THE STONE MOUNTAIN SANITARIUM

STONE MOUNTAIN, GA.

TELEPHONE 9105

WM. A. GARDNER, M.D., *Owner and Medical Director*

ATLANTA OFFICE: Medical Arts Building

JACKSON 3930





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*Consulting Physician*

H. H. OGBURN, M. D.

*Consulting Surgeon*

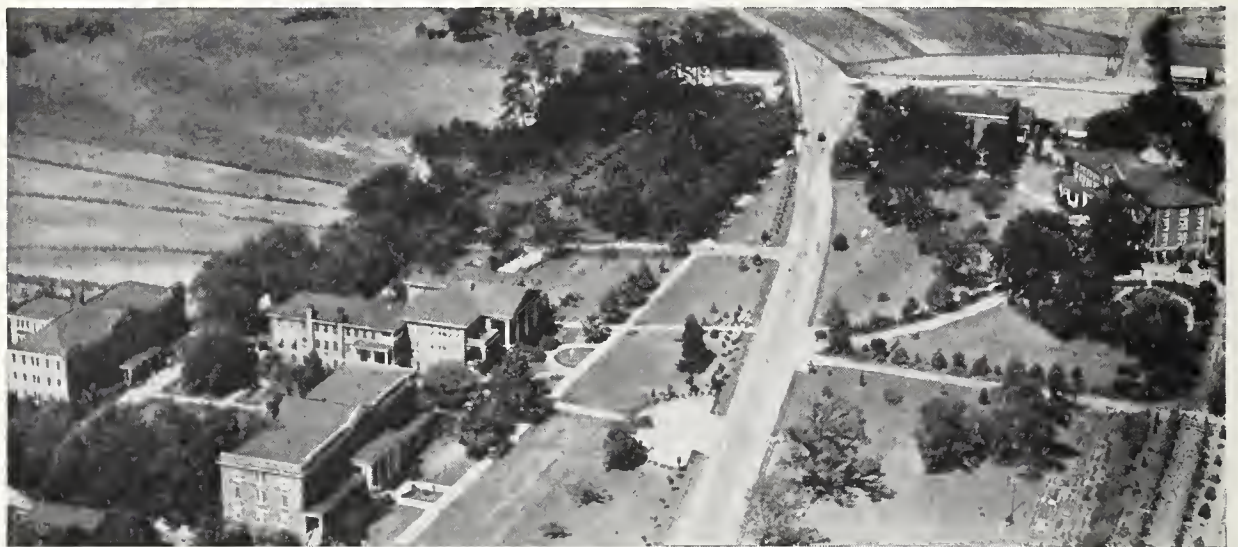
CHAS. W. MOSELEY, M. D.

*Consulting Physician*

*All correspondence should be addressed to*

## GLENWOOD PARK SANITARIUM

GREENSBORO, N. C.



## ALLEN'S INVALID HOME

E. W. ALLEN, M.D.

*Physician in Charge, Department for Men.*

H. D. ALLEN, M.D.

*Physician in Charge, Department for Women.*

**For Nervous and Mental Diseases**



# THE JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA

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## THE ASPIRATION AND PNEUMOTHORAX METHOD OF TREATING EMPYEMA\*

THOMAS HARROLD, M.D.  
*Macon*

It is not the purpose of this paper to enter into a general discussion of empyema but rather to call the attention of the society to a new method of treatment, first described by Dr. Joseph A. Danna of New Orleans in the *Journal of the American Medical Association* 1931, Vol. XCVI, page 1453. A very complete paper by the same author on the same subject was published in the February 15, 1933, number of *Surgery, Gynecology and Obstetrics*. Dr. Danna was attached to the Italian army during the war and became interested in the epoch making work of Morelli in the treatment of gun-shot wounds of the chest and empyema. Morelli in turn was a pupil of Forlanini, whose pioneer work in artificial pneumothorax is one of the classics in medical history.

During the summer of 1932, Dr. Piero C. Braga, of Rome, Italy, who was sent by the Rockefeller Foundation to spend some time with the Bibb County Public Health Department, was kind enough to translate several original articles by Morelli and others for me. He told me that when he was an interne in a hospital in Rome that the usual treatment of hemothorax was aspiration of the blood in the pleural cavity with air replacement as recommended by Dr. Morelli. It is claimed that the incidence of empyema is greatly reduced, the hemorrhage from the lung controlled and the convalescence shortened in cases treated in this manner, soon after the injury is received and before the blood clots. To use this method it is necessary to

close tightly any open chest wound. Dr. Braga was surprised that this method of treatment was not commonly used in this country. I have used it successfully in one case with prompt recovery. I attempted to use it in another case about three weeks after the injury at which time empyema had already developed. The large blood clots made it impossible to empty the chest and open drainage had to be done.

Almost every doctor has had the occasional experience of seeing a case of empyema cured by single or multiple simple aspirations of the chest. The army reported approximately 10 per cent of such cures among their cases in the influenza epidemic in 1918 and 1919. However, this method is not reliable and the few cures obtained should be considered fortunate accidents. The method of aspiration of pus and replacement with air, thus producing an artificial pneumothorax, described by Dr. Danna is based upon entirely different principles and is not to be confused with simple aspiration. With simple aspiration it is impossible to remove all of the fluid contained in the chest because the lung is forcibly re-expanded and sooner or later comes in contact with the point of the aspirating needle before the last of the fluid is removed. When the fluid is replaced by air, the remaining fluid settles to the bottom of the pleural cavity by gravity and can be removed almost to the last drop by choosing the lowest possible intercostal space for aspiration and having the patient lean towards the needle so that the fluid will settle there. The lung does not reexpand and come in contact with the needle because the air prevents it from doing so. Thus one fundamental surgical requirement—adequate drainage of pus—is fulfilled.

Except in unusual cases, empyema develops directly as a result and because of disease in the lung. In tuberculosis it is frequently

\*Read before the Medical Association of Georgia, Macon, May 12, 1933.

necessary to produce an artificial pneumothorax in order to put the diseased lung at rest and give it a chance to heal. When a bone is broken we put it at rest with splints to promote healing, and in almost every disease, the object of treatment is to provide physiological rest for the diseased organ so that nature may effect the cure. Dr. Danna believes that the length of time required for the cure of empyema depends primarily upon the healing of the focus of disease in the lung which continually re-infects the pleural cavity. As soon as this focus heals the pleural drainage will stop, but not until then.

It would seem ideal to keep the diseased lung collapsed in cases of empyema until healing takes place. Thus, Dr. Danna's method fulfills a second fundamental surgical requirement—rest.

It will be quickly pointed out that both of the above requirements are met by the time-honored operation of rib resection and open drainage. This is true, but open drainage adds the additional complicating condition of an open pneumothorax. After empyema has existed for some days or weeks, the pleura becomes thickened and the mediastinum and heart more or less fixed in position by the thickening of the pleura and pericardium and an open pneumothorax is not a serious condition. However, in its early stages, when the patient is very sick and septic and badly in need of relief, the pleura and pericardium are still thin and the sudden production of an open pneumothorax frequently embarrasses the respiration in the other lung because when the diaphragm descends in inspiration, instead of expanding the lung normally, the mediastinum is simply pulled over to the normal side. The resulting to and fro action of the mediastinum is likewise embarrassing to the heart and circulation. That is the reason that it has been customary to wait for empyema "to ripen" or the pus to become thick. The consistency of the pus is unimportant, but it is very important to wait until the mediastinum becomes fixed. It is well known that the empyema, due to the pneumococcus, usually does not occur until the pneumonia is practically over and in these cases the empyema is the only problem, and delay is not dan-

gerous. On the other hand, the empyema which occurs in influenzal or broncho-pneumonia is generally caused by the streptococcus and usually develops during the most active stage of the pneumonia and is a far more dangerous complication than is the pneumococcus type which follows lobar pneumonia. In the streptococcus types early drainage of the empyema is necessary for the relief of the patient. One cannot wait for the thickening of the pleura and fixation of the mediastinum, so that rib resection with the resulting open pneumothorax should not be done in this type of case and Dr. Danna's method would seem ideal.

The various closed methods of drainage are highly satisfactory—when they work. However, they are all more or less complicated and require very careful attention by experienced nurses. Even then they frequently become plugged with fibrinous masses or accidentally disconnected. Most of the closed methods are dependent on irrigation and the maintenance of a certain amount of negative pressure which, of course, tends to cause re-expansion of the diseased lung. As pointed out above, continued collapse of the diseased lung probably promotes healing and is desirable. A considerable number of cases treated by the closed method eventually require rib resection and open drainage. Even so, closed drainage is to be preferred in the early stages of the disease.

The Danna method is very simple and requires no apparatus not found in any doctor's office. All that is required is a 30 or 50 cc. Luer syringe, connected with a large size aspirating needle by six or eight inches of stiff rubber catheter tubing. The patient should be in the upright or semi-reclining position, supported by pillows or an assistant so as not to be in a strained and tiring attitude. The skin is infiltrated with novocaine and the aspirating needle inserted into the pleural cavity in the 9th or 10th intercostal space in the posterior axillary line, care being taken not to penetrate the dome of the diaphragm. In case the empyema is localized instead of general, the needle should be inserted into the most dependent part of the cavity. The fluoroscope or x-ray is almost indispensable for guidance in these



cases, at least for the first aspiration. A syringe of pus is now withdrawn, a clamp placed on the connecting tube, the syringe is disconnected, emptied of pus and filled with air. The syringe is reconnected with the tube, the clamp removed and the air slowly injected into the pleural cavity. This process is repeated until the cavity is completely emptied. If the amount of fluid present is large and has displaced the mediastinum to the opposite side, of course less air is replaced than the quantity of fluid removed. When the cavity is empty only air is obtained when one tries to draw out more pus. The point of the needle should then be depressed and the patient should lean toward the needle and another aspiration made. It requires patience, but the cavity can be completely emptied in this manner.

The pus reaccumulates and aspiration should be repeated every five to seven days at first and then at longer intervals. As a rule, the pus reaccumulates faster than the air is absorbed and care and experience are necessary to avoid the development of positive pressure with displacement of the mediastinum to the opposite side. A pneumothorax machine with a water manometer is ideal for the purpose, but is rarely available. For practical purposes I think it is sufficient to disconnect the tube from the needle at the end of the aspiration so that air may pass freely either in or out of the chest until atmospheric pressure is approximated. This takes only a few seconds.

In successful cases the temperature drops within twenty-four hours after the aspiration and there is marked improvement in general condition. As the pus reaccumulates, the fever returns, to fall again as soon as the pus is removed. After a week or ten days there is very little fever between aspirations and the patient can be allowed out of bed as soon as his strength permits. The absence of a draining wound and frequent dressings is very pleasing both to patient and doctor. These patients gain in weight and strength and are up and around the house while still having several hundred cubic centimeters of pus removed from their chests every week. The quantity of pus removed decreases with each aspiration and finally fails to reform

at all. From one to eight aspirations have been necessary in my cases. There is no reaction following one of these treatments.

What are the difficulties and stumbling blocks encountered in the use of this method? The chief difficulty is that after the pus becomes thick, in a certain number of cases, large clots of fibrin form, which plug even the largest needle and therefore make complete emptying of the cavity impossible. Irrigation under such circumstances is of little or no help. Dr. Danna, in a personal communication, states that he has successfully digested such clots with a solution of papain in a few cases and that he is continuing his experiments along this line. I have had no experience with papain. When the needle becomes hopelessly plugged, he advises making a small intercostal incision to allow evacuation of the clots, then allowing the wound to heal and continuing the aspiration method. I have attempted this procedure in one case without success. Frankly, this last procedure advised by Dr. Danna does not appeal to me. I feel that the making of an intercostal incision is forcing the method beyond its limits, for by this time there is sufficient fixation of the mediastinum to allow open drainage of the pleural cavity to be done satisfactorily and with no risk. It is against all of my surgical instincts to make an incision into the pleural cavity and then close it in order to continue another method of treatment. Operation causes very little shock or reaction at this stage.

In 1921 Dr. Morelli discussed the method of treating empyema, later described and developed by Dr. Danna. He said that the results are good if evacuation is complete and that it is best used in recent cases caused by less violent organisms. It is not satisfactory in old cases and sometimes the pseudomembranes cannot be evacuated. It is the best method for the treatment of bilateral empyema.

Dr. Danna has reported almost 100 per cent success with this method. In spite of a great deal of enthusiasm and persistence on my part, I have had a number of failures in whom operation finally became necessary after a fair trial of the method. I have also had the brilliantly successful results described

by Dr. Danna. I hope that in the future, with increased experience, I will have fewer failures.

What then are the advantages of this new method of treatment?

First: It offers the quickest relief from both pressure and toxemia without a shock or reaction to patients who are usually very sick and worn out by their preceding pneumonia.

Second: In the group of cases that respond satisfactorily to this method of treatment and who do not develop the fibrinous masses which block the needle, it is by far the most satisfactory method of treating empyema with which I am familiar.

Third: In those cases in which subsequent operation becomes necessary, they have at least had temporary relief when they needed it most and the best possible preparation for an open thoracotomy which, from a practical standpoint, I consider superior to the closed methods of drainage.

Fourth: In cases of localized empyema there is less danger of spreading the infection to the remainder of the pleural cavity than if operation is performed.

Fifth: There is better restoration of function of the diseased lung and fewer adhesions.

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#### *Discussion on Paper By Dr. Thos. Harrold*

DR. CLEVELAND D. WHELCHER, Gainesville: We all admit that one of the requirements for dealing with any amount of pus is drainage. In this particular type of drainage, we have the two types, the extreme open method and the extreme closed method of Dr. Danna of New Orleans.

I have had no experience with the closed method, therefore I cannot make any remarks about it that are worth while. However, I think it is a procedure that is well worth trying. Personally, I had much rather have a small tube in the chest cavity. I have never found it necessary, except in one or two cases, to do a rib resection. In those cases I have gotten into trouble once or twice.

The procedure I have used with satisfaction is the stab drainage, inserting a catheter or a rubber tube

through a trocar. These cases usually drain well, and we have had little or no trouble with them.

DR. W. ARTHUR SELMAN, Atlanta: This paper is of much interest to me, though I haven't tried the air replacement method. The closed method, I think, has become much more popular in recent years.

I want to say that very frequently in doing this type of drainage we accidentally do just this air replacement method, because so frequently a little air leaks around this tube and produces a pyopneumothorax, whether we intend it or not. I can see certain advantages in this method. One of them is the danger of the needle irritating, and scratching the surface of the lung, and producing a cough, and a violent cough during an aspiration, where the lung is pushed violently up and down, a needle point, is liable to produce a bronchial fistula, which is a serious complication in any empyema. I think in that instance air replacement, keeping the lung forced back from the chest wall, has some value.

I want to call attention to these fibrous clots that so frequently plug the needle. At first you think you have no empyema, or if you have it these clots refuse to be drained through an ordinary tube, let alone a needle. In that case I use essence of caroid, according to the method of Dr. J. E. Campbell of Atlanta, and we seem to get some digestion of the clot.

DR. FRANK K. BOLAND, Atlanta: I think we should remember that the results in treating empyema depend as much upon the virulence of the infection as upon the method of treatment we adopt. We see waves of good and bad results in empyema cases. If we have an epidemic of severe pneumonia, we have bad empyema cases. If the epidemic is mild, the empyema is apt to be mild.

Dr. Graham, of St. Louis, a member of the Empyema Commission, calls our attention to this fact, that we should observe principles in the treatment of empyema, more than adhering to any particular method of treatment. The two principles which he recommends are, first, that we should not operate on any acute empyema while acute pneumonia is still in progress; and, second, not to open a pleural cavity, as Dr. Harrold mentioned, until dense adhesions form, so as to prevent collapse of the lung and compression of the opposite lung. I am glad Dr. Harrold has called our attention to these important matters.

DR. THOMAS HARROLD, Macon: I think the real beauty of this method, after the enthusiasm for it wanes a little bit, will be that it can be used in the sickest patient, desperately ill of pneumonia, without upsetting him in the slightest, and he will get a certain relief from toxemia, and frequently a striking drop in temperature, long before anyone would think of doing a rib resection. If you have prepared them with this closed pneumothorax, they are accustomed to breathing with one lung, and the readjustment has taken place. I think that will be the place of this method in the treatment of empyema.



## NEUROSYPHILIS\*

*The Effect of Modern Treatment  
on Its Incidence*

JOHN W. BRITTINGHAM, M.D.

*Augusta*

Many observers share the belief that neurosyphilis has increased since the use of the arsphenamines. It is the purpose of this paper to discuss first the incidence of this type of syphilis, and then the relation to it of arsphenamine therapy. The term neurosyphilis means infection of the meninges, brain, cord or cranial nerves with *Treponema pallidum*. A distinction must be made between infection and invasion of the neuraxis. Invasion is said to occur in practically every case, but infection is not present until the *Treponema* become lodged in the tissues and produce lesions. At present we have no method of determining the cases in which invasion alone occurs, but it is an undisputed fact that they constitute a large number. The factors which influence the infection of one individual and resistance of another are not definitely known, but many interesting observations regarding them have been made. Two known factors are race and sex.

Moore<sup>1</sup> in a comparative study of 237 of his own patients and 243 from the clinic of Fordyce and Rosen<sup>2</sup> came to the conclusion that neurosyphilis reached its peak at the end of twelve months after the initial infection. All of these patients had had one or more spinal punctures, which fact makes this estimate all the more accurate. Turner<sup>3</sup> in a recent study of 10,000 syphilitic patients who were seen at the Johns Hopkins Hospital Out-patient Department revealed the fact that 26.1 per cent of males and 10.5 per cent of females had some form of neurosyphilis. The percentage of white and negro patients was about the same, yet the incidence of neurosyphilis in the whites was more than three times that in the negroes (33 to 10.5 per cent).

Moore's figures regarding various special types such as optic atrophy are at variance with those from the University of Georgia clinic where this condition is seen four times in the negroes to every one case in the whites. This discrepancy is probably due to the larger percentage of negroes in our clinic.

Turner's figures regarding tabes are striking. In his group there were only 57 tabetic negroes compared with 162 tabetic white patients. Many other figures have been published showing essentially the same comparatively increased resistance of negroes to this type of syphilis, making it apparent that, either the negro has a stronger defense mechanism as far as his nervous system is concerned, or the white individual has some relative predisposition to this type of infection. As far as our observations are concerned this apparent neurologic immunity in the negro is more than balanced by the extraordinary incidence of cardiovascular syphilis in the race.

It has been conceded generally that the sex of an individual plays a part in the development of neurosyphilis. Many observers have called attention to frequency of this type of syphilis in men compared with that in women. Moore<sup>4</sup> has said that it is about three times as frequent in males as in females, and by way of explanation he reported his studies of a large group of women who had, and women who had never borne children. He discovered that the percentage of neurosyphilis in women who had never borne children was twice that in women who had borne one or more children. In his group of 132 women he showed further that there was an apparent increase of protective influence exerted by repeated pregnancies. The incidence of neurosyphilis in primipara was 19.5 per cent compared with only 9.3 per cent in those who had had two or more pregnancies. Almost half of the women who were clinically neurosyphilitic in this group had not been pregnant since infection. Moore suggested that about half the parietic females may be parietic because of their sterility.

Another and more recent explanation for woman's apparent increased resistance to neurosyphilis is that of Peterson and Hecht<sup>5</sup>. These observers working at the University

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†From the Department of Medicine, University of Georgia, Augusta, Ga.

of Illinois clinic stated that the menstrual cycle was a factor in the treatment of syphilis. They outlined the various physiologic and inflammatory changes that accompany the premenstrual period, and demonstrated that they correspond to those that are induced when a shock reaction of mild degree takes place in a patient, as, for instance with some form of non-specific therapy. This modified shock reaction in their opinion helps the female to combat syphilis.

Before discussing the effect of treatment on the incidence of neurosyphilis some of the difficulties encountered in any estimate of this type of disease must be mentioned. First of all, when most of the percentages of neurosyphilis as it existed prior to arsphenamine were published, the Wassermann reaction had not been announced. Today with the aid of more delicate serologic tests and spinal fluid studies there is no wonder that so many cases of neurosyphilis are being diagnosed. Stokes<sup>6</sup>, Fordyce and Rosen<sup>2</sup> and many others are of the opinion that this is merely an apparent increase due to the improvement in diagnostic facilities. This seems to be the consensus of opinion among syphilologists for the present, but there is considerable evidence in favor of a direct influence of arsphenamine as far as neurosyphilis is concerned. Kolmer<sup>7</sup> is of the opinion that it is highly probable that this type of syphilis has increased in the past fifteen years, and that this increase has been due to the use of arsphenamines. However, he expressed the opinion that the increase was not due to these drugs *per se* but to the inadequate use of them. Cole<sup>8</sup> quotes Jadassohn, the German syphilologist, as saying that too little arsphenamine is bound to predispose to neuro-recurrences. Brown and Pearce<sup>9</sup> have demonstrated this to be true in experimental syphilis. Rabbits that were given testicular chancres, and then either castrated or treated with subcurative doses of arsphenamines, were observed to be distinctly susceptible to more widespread dissemination of their disease.

In other words destruction of the focus of infection was accompanied by a diminution of protective or immunologic agents that might have developed. Evidence has ac-

cumulated in support of the belief that the protective or antibody substances, which favor the development of latency in syphilis, are produced at the focus of infection probably by the lymphocytes and plasma cells that are attracted there in such large numbers. Fournier<sup>10</sup> followed the development of paresis in eighty-three cases whom he had observed first in the primary stage. None of these had severe secondary rashes. However, of 243 cases of severe secondary syphilis followed for many years not one showed symptoms of general paresis or tabes.

At the Syphilis Division of the University of Georgia Out-patient Department the majority of the patients are of the type that disappears from the clinic as soon as their syphilitic lesions begin to fade under treatment. Many of our patients are admitted with the preconceived idea that six or some arbitrary number of injections will cure them. The result has been a large number of patients for this particular study. I have reviewed the records of 134 patients whom I have examined and classified as having clinical neurosyphilis. These were consecutive admissions and not selected patients. This group includes every type of lesion such as tabes, hemiplegia, optic atrophy and other cranial nerve disturbances. The vast majority of them, however, have been listed as central nervous system syphilis unclassified. They were patients with any of a variety of complaints such as severe headaches, weakness, vertigo, numbness and tingling of extremities, etc., and positive Wassermann reactions. Of course, these symptoms are very common in people without syphilis, but presence in a known syphilitic patient and favorable response to anti-syphilitic treatment is enough to place the burden of proof upon anyone doubting their syphilitic origin. Only thirty-six of these patients had received arsphenamine prior to appearance of symptoms, and of these only six had received more than six injections. The others were treated as outlined in Table I. Ninety-eight of these patients had had no arsphenamine, or anything other than occasional doses of potassium iodide or the old arsenic and iodide mixture which was so popular in this clinic several years ago.



Table I

*Relation of Treatment to Neurosyphilis*

Amount of Treatment	No. of Pat.
None	98
Two doses arsphenamine	4
Three doses arsphenamine	7
Four doses arsphenamine	6
Five doses arsphenamine	3
Six doses arsphenamine	10
Seven doses arsphenamine	4
Eight doses arsphenamine	1
Ten doses arsphenamine	1

From the number of patients treated at this clinic in an irregular fashion one would expect more neurosyphilis if irregular treatment is a strong predisposing factor. Nevertheless it is interesting to note that no clinical neuro-syphilis was observed in any patient who had received more than ten doses of one of the arsphenamines. It must be mentioned here that the drug used most frequently was neoarsphenamine and that I have used the term arsphenamine to include not only this but the occasional patient who received old arsphenamine or sulpharsphenamine. This group of patients is too small to supply any definite conclusions, but this study suggests that a small amount of arsphenamine might be a predisposing factor to the development of neurosyphilis, and definite evidence that a reasonable amount serves as distinct protection against this type of disease.

*Summary*

Neurosyphilis is more frequent in the white race and in males of both negro and white races.

Pregnancy and the menstrual cycle apparently exert some protection against neurosyphilis.

Increase in neurosyphilis since arsphenamine therapy is probably only apparent.

Ninety-eight of 134 patients with neurosyphilis had had no arsphenamine prior to symptoms.

Thirty-five of 134 patients had received less than ten injections of an arsphenamine prior to development of symptoms.

There is no evidence that adequate arsphenamine therapy will predispose a patient to development of neurosyphilis.

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## ACUTE INTESTINAL OBSTRUCTION

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The mortality of 37.9 per cent shown in a series 1,042 cases of acute intestinal obstruction reported by Souttar in 1925 constitutes a charge which incriminates every member of the medical profession. The mortality has not decreased materially during the past thirty years. Much experimental work has been done to determine the nature of the toxemia associated with ileus, but there has resulted no unanimity of opinion as to the nature or source of the toxin responsible. However, in spite of the persistently high mortality and of the disappointing results of experiments conducted to determine the nature of this toxemia, much improvement has been made during recent years in the therapeutics of this serious disease and measures that should secure a decided decrease in the mortality rates are now available.

The etiology is clear. The signs and symptoms are such that they should be recognized and the gravity of the condition appreciated at once, in order that an early diagnosis may be made and the proper treatment instituted promptly. Ochsner<sup>1</sup> has emphasized the importance of knowing whether the obstruction is of the adynamic or mechanical type; whether there is interference with the blood supply of the gut, as is found in strangulation, volvulus, and in mesenteric thrombosis; and whether the obstruction is of the so-called high or low type.

Adynamic or paralytic ileus occurs more frequently as a result of peritonitis than from any other cause. It occasionally occurs also during the course of serious systemic infections such as pneumonia, typhoid, streptococic septicaemia, etc. It always occurs late in the course of mechanical obstruction. The most frequent cause of mechanical obstruction is hernia which accounted for 28 to 60 per cent of the cases reported in different articles. Peritoneal adhesions were the cause of 19.2 per cent of the 343 cases reported by Miller<sup>2</sup> in 1929 and accounted for only 11 per cent of the 3,064 cases reported by Souttar in 1925.

The increase in the proportion of the cases due to peritoneal adhesions is not merely fortuitous, but points a trend which every abdominal surgeon must seriously consider.

Intussusception, carcinoma, internal strangulation, volvulus, and gall stones are important causes in the order named. In this connection, it is well to remember that a medical history of previous intestinal trouble should suggest the possibility of the obstruction being in the large bowel, as 91 per cent of obstructions in the colon are due to carcinoma which usually gives trouble for some time before the obstruction develops. On the other hand, if the onset is sudden in a previously healthy patient, the chances are nine to one that the obstruction is in the small intestine and the odds are nearly three hundred to one against malignancy.

An adynamic ileus should be suspected whenever obstruction develops in a patient suffering from some pre-existing serious abdominal disease. It is difficult to determine whether the obstruction is accompanied by interference with the blood supply of the intestine or not. As a rule, the onset is much more abrupt and the progressive development of the symptoms much more rapid when there is interference with the blood supply. Also, in addition to the intermittent cramp-like colic present in mechanical obstruction, there is usually a persistent, agonizing pain that does not move about as the colicky pain does, but remains localized. Obstruction, complicated by interference with the blood supply, carries a very grave prognosis for a patient can not long survive an interference

with the blood supply to his gut with its consequent gangrene and peritonitis.

It must be remembered that interference with the blood supply may also occur within the walls of the gut, being produced by the distension incident to the obstruction. Dragstedt, Long and Millet<sup>3</sup> have shown that the intrainestinal pressure necessary to stop the flow of blood within the veins of the intestinal wall increases progressively from above downward, being thirty-five mm. of mercury in the duodenum and ninety-five in the colon. It follows that interference with the blood supply and gangrene would occur much more quickly in high than in low obstruction.

It is a well recognized fact that a high obstruction is much more serious than a low obstruction. A patient may survive for ten days or more with an obstruction in the lower colon that does not interfere with the circulation of the bowel, but has only a few hours of life left to him if the upper jejunum is occluded. However, obstruction of the lower colon, if accompanied by interference with the blood supply, provokes a very acute onset with marked vomiting and great pain, as is found in volvulus of the sigmoid. Such an obstruction simulates the severity of high obstruction, which always provokes severe vomiting. It has not yet been satisfactorily explained why obstruction high in the intestine should cause more vomiting and a more severe toxemia than that which accompanies low obstruction.

If the toxemia of acute intestinal obstruction is due to absorption of toxins from the obstructed loop, it appears paradoxical that the toxemia is greater when the obstruction is high, occurring in the secretory portion of the bowel and the portion that is comparatively free from bacteria than when it occurs low, in the portion of the bowel whose function is absorptive and whose bacterial flora is abundant. It is also difficult to reconcile with this theory the fact that the toxemia increases with the increasing distension of the bowels which interferes with absorption from the mucosa.

The diagnosis of acute ileus should not be difficult. As intimated above, the signs and symptoms vary, depending somewhat upon



the site of the obstruction, whether or not there is an accompanying interference with the blood supply of the gut, and whether of the mechanical or adynamic type. The most constant symptom is pain, being intermittent and colicky when the obstruction is mechanical, and constant, dull and aching in adynamic ileus. Frequently the patient will indicate some part of his abdomen where the pain is most severe and the examiner may palpate a mass at the indicated spot. Particularly is this true in those cases due to intussusception or in which there is a strangulation in mass due to volvulus or to adhesions.

In mechanical obstruction the pain is frequently accompanied by visible peristalsis which becomes less marked until it finally disappears with the increasing distension and thinning of the intestinal wall. Visible peristalsis is most marked in those cases in which an acute obstruction is superimposed upon a partial obstruction which has caused an hypertrophy of the muscularis of the intestine. Vomiting is the next most frequent symptom. In the beginning the vomiting is reflex, depending upon the acuteness of the onset more than upon the site of the obstruction. Late, vomiting is due to the obstruction; being invariably present, marked, and frequent when the bar is high, but often absent altogether when the bar is low in the sigmoid. The vomitus is first of gastric contents, later bilious, becoming brown in color and feculent in odor still later. The absence of evacuations from the bowels is of little value, as absolute obstipation is a sign of such late occurrence as to be of no benefit to the patient, even if it helps the dilatory doctor to a tardy diagnosis.

Distension is not an early sign of acute ileus. It varies inversely with the vomiting; being absent, or only slight, and limited to the upper abdomen in high obstruction when the vomiting is most marked and greatest in low obstruction, when vomiting may be absent. Roentgenograms are of much value in the diagnosis of obstruction. Wangenstein and Lynch<sup>4</sup> found that, within four or five hours after simple obstruction occurs, roentgenographic evidence of the distension of the gut above the point of the occlusion can be

shown. Ochsner and Granger<sup>5</sup> emphasized the importance of taking the roentgenogram in such a position as will show the different fluid levels and recommended that an antero-posterior view be secured with the patient in an upright position. In this manner, multiple fluid levels capped with gas can be demonstrated, furnishing more conclusive evidence of obstruction.

When there is a doubt as to the type of obstruction it is advisable to give by mouth two ounces of mineral oil every two hours regardless of the vomiting and without delaying the institution of measures for the relief of the patient. Frequently the oil will be obtained through a rectal tube or by enema, thus definitely excluding mechanical obstruction. Elevation of the head of the bed six to eight inches will expedite the appearance of the oil. The prognosis in ileus depends more upon the doctor who first attends the patient than upon any other single factor, as the mortality increases directly as the time intervening between the occurrence of the obstruction and its diagnosis increases. The prognosis is always grave.

In mechanical obstruction, operation within the first twelve hours carries a mortality of 29 per cent; within the first twenty-four hours, a mortality of 52 per cent; within forty-eight hours, a mortality of 60 per cent; within seventy-two hours, 63 per cent; within ninety-six hours, 73 per cent; and a mortality of 84 per cent for those patients going over ninety-six hours. Prognosis is also influenced by the point of the obstruction and by complicating conditions; being higher in obstruction of the upper gut and in cases complicated by infection or by interference with the blood supply. As adynamic ileus is usually superimposed upon some condition that is in itself of serious portent, ileus of such a type carries a graver prognosis than that of mechanical obstruction.

The discomfort and exhaustion incident to the vomiting associated with obstruction is almost completely relieved by the use of the Matas-Levine indwelling nasal catheter. This catheter, inserted through the nose into the upper duodenum, affords the patient the pleasure of cooling drinks and at the same time relieves him of the distension of the

stomach and upper intestine and prevents the accumulation of fluid in these portions of the intestinal tract.

In treating ileus of either type, measures for the relief of the dehydration and hypochloræmia are essential. Although relief of the obstruction is the indication of first importance in mechanical obstruction, it is advisable to institute measures for relief of the dehydration and hypochloræmia before operation. It has been my experience that no drug is of value for this purpose and it is certain that drug therapy is of decided harm, if other measures are neglected while the hopeful physician pursues the Fabian policy of waiting for his drug to take effect. The drugs most frequently used are given with the hope of stimulating peristalsis. Obviously this is futile, probably harmful, in mechanical obstruction and recent experimental work has shown that intestinal atony gives no response to any drug<sup>6</sup>.

It has been shown that pituitary extract, the drug most frequently used in intestinal atony, not only is of no value but actually decreases the mobility and tone of the intestinal musculature. Choline, acetyl-choline, pitocin, and peristaltin have proven unreliable in their action and without value. Ochsner et al<sup>6</sup> found that physostigmine was the only drug that was at all consistent in its action. They reported that this drug seemed to have a stimulating effect in early intestinal obstruction, although it had no significant effect on the normal bowel. It seemed in no instance to have a depressing effect on the intestinal musculature such as was shown frequently by the other drugs used.

For relief of the dehydration and hypochloremia, the intravenous use of hypertonic sodium chloride solutions in acute ileus of the adynamic or of the mechanical type is striking. Since the use of such solutions were advocated by Ross<sup>7</sup> and by Hughson and Scharff<sup>8</sup> they have been extensively used both experimentally and clinically. It has been shown experimentally that the toxemia of high intestinal obstruction can be prevented by the administration of large amounts of saline solution, water, and food during the first five days and that the animal will die

of starvation later without developing toxic symptoms. It has been claimed and apparently supported by the experimental work of Armour et al<sup>9</sup> that the signs and symptoms commonly attributed to the toxemia of acute intestinal obstruction are not due to toxemia, but to dehydration and hypochloræmia. It has been shown also that there is a progressive rise in the carbon dioxide combining power of the blood plasma and in the urea and non-protein nitrogen and a decrease in the blood chlorides as the disease progresses. Sodium chloride, given intravenously in solution, tends to combat these changes and to restore the blood content of these substances to normal.

More recently Ochsner, Gage, and Cutting<sup>10</sup> have conducted experiments to determine the relative value of different salt solutions in stimulating intestinal peristalsis and their results seem to indicate conclusively that the hypertonic solutions serve to stimulate the mobility of the intestine as well as to correct the chemical changes of the blood. They found that a hypertonic Ringer's solution or a hypertonic Hartman's solution was more effective than a solution of hypertonic sodium chloride alone. The so-called hypertonic Ringer's solution was obtained by multiplying the concentration of Ringer's solution by twenty, which gave a solution containing 18 per cent sodium chloride, 0.52 per cent calcium chloride, and 0.6 per cent potassium chloride.

The Hartman's solution used contained 11.7 per cent sodium chloride, 5.6 per cent sodium lactate, 0.74 per cent potassium chloride, and 0.54 per cent calcium chloride. They consider the addition of these electrolytes to the sodium chloride to be of distinct value and report that the intestinal contractions in response to these solutions were of greater amplitude and of longer duration than those obtained by the sodium chloride alone. They recommend the administration of 10 to 15 cc. of the concentrated Ringer's solution or Hartman's solution in cases of ileus, emphasizing the importance of giving it slowly.

Clinical experience would seem to corroborate the conclusions reached as a result of the experimental work. Recent medical lit-



erature has carried many articles reporting the great value of hypertonic saline solution in adynamic ileus. My personal experience with it has been such as to convince me that it is the most valuable method of treating adynamic ileus that we possess. It has been my custom to give 300 cc. of a 2 per cent sodium chloride solution intravenously and to have the nurse insert the rectal tube. If the bowels do not move this dose is repeated after four hours. Frequently a patient will develop diarrhea after 600 to 900 cc. have been given.

Experimentally, ileostomy or enterostomy has not justified the popularity which it enjoys in clinical surgery. Orr and Haden<sup>11</sup> reported a series of cases of obstruction, experimentally produced in dogs, in which the animals having enterostomies performed had an average life duration of three days after the obstruction while the animals having no enterostomy had an average life of four days. In adynamic ileus the use of hypertonic salt solutions would seem to be of such decided value as to render enterostomy inadvisable unless its value can be established upon a more substantial basis, either by experimental work or by a more careful clinical evaluation than has yet been given. Whether enterostomy without relief of the obstruction is of value in mechanical obstruction would seem to depend upon the location of the obstruction.

If unable to determine the site of the obstruction before operation, an incision should be made along the outer border of the right rectus muscle just below the level of the umbilicus. The cecum should be picked up and inspected immediately. If it is found to be distended no further exploration should be made, but a cecostomy should be performed. If the cecum and lower ileum are found to be collapsed, the operator should quickly examine the hernial orifices, and, finding nothing, should rapidly follow the collapsed gut up to the point of obstruction. The reason for the different procedure in the two cases depends upon the fact that the patient who suffers from intestinal obstruction and presents a distended cecum at operation has an obstruction in the colon or sigmoid and only one in seventy-five chances

of being left with a strangulated gut when the cecostomy is performed. If the patient presents a collapsed cecum and terminal ileum indicating a higher obstruction, he has almost even chances of being left with an unrelieved strangulation if an enterostomy should be performed upon the distended bowel.

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## THE TREATMENT OF AMEBIC DYSENTERY

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In view of the recent marked increase in amebic dysentery in the southeast, and the fact that none of the modern treatments have proved entirely satisfactory, any adjunct to the methods now in vogue should be of some value. In 1929 before a meeting of the Fulton County Medical Society, I reported a system of treatment which had been 100 per cent curative in every case used. Although the series included only twelve cases (none having evidence of liver abscess), the constancy of immediate results and the comparison of these results with previous treatments these individuals had received, lead me to believe that there was something well worthwhile in this treatment, and particularly worthy of being reported again at this time.

This treatment employs no new drugs, but relies on the long used ipecac and bismuth, the secret of success apparently being in the way these drugs are used.

Based on observations made in these cases, I have evolved a working hypothesis as follows: First, that ipecac is efficacious in attacking the amebae which have burrowed

into the walls of the intestines and probably those which have entered the blood stream, but it cannot be given in doses large enough to kill or sufficiently devitalize those amebae free in the lumen of the intestine. Second, that bismuth will kill or devitalize the amebae in the lumen of the intestine and those in the mucus spread over the intestinal wall. Third, that bismuth is sufficiently active only when there is a certain concentration of it in the gut, which degree of concentration calls for actual constipation. Fourth, that less than the needed amount of ipecac will of course fail in the desired action, while an excess of ipecac will prevent the necessary constipating effect of the bismuth. The combined action of the two drugs therefore is a washing out of the tissues with the ipecac, and a devitalizing of the amebae in the lumen by the bismuth, its action on the amebae probably including a definite and necessary element of astringency. These points were apparently proved in the following cases:

The first patient treated was a man who had reached such a stage of emaciation and weakness that I had expressed a grave doubt as to his recovery. Ipecac, emetine, bismuth, and various enemas had been employed without relief, but on instituting this combined and balanced treatment his improvement was immediate, complete, and permanent. This result convinced me of the value of the treatment as a whole, but of course proved nothing as to the individual points of the theory.

A second patient treated proved a point in the necessity of balance of drugs. He was a young man whom I had treated for nearly a year at frequent intervals without getting relief of his diarrhea for more than a few days at a time. Finally I awoke to the fact that he was taking a five-grain ipecac pill, while other patients had been treated with a ten grain alcrestia ipecac pill. On doubling his ipecac dosage and starting again with the gradual constipation by bismuth, he was apparently cured in two weeks, and was still free from recurrence or symptoms when last seen five years later.

The third patient treated illustrated the necessity of balance from the other direction, apparently proving that an excess of ipecac would prevent constipation and thereby nullify the action of the bismuth. I can best discuss this case by quoting the remarks of the patient on having his treatment outlined to him. This man had been unsuccessfully treated for two years, his bowel movements at no time being below six a day, and his treatment had probably included all the recognized drugs used in this disease. He was extremely skeptical of getting relief. After finishing his examination, large numbers of amebae being found on every smear, I handed him his prescriptions and told him to take four pills a day. He interrupted me to produce from his pocket a large bottle of the same pills, saying "They won't help me. I am taking ten a day now." I insisted that he reduce them to four, and follow instructions.

Next I told him to start on a rounded teaspoonful of bismuth three times a day, and increase this dose by one teaspoonful daily. Again he interrupted, "But doctor I have taken a barrel of bismuth, and it won't help me." I finally had to promise to pay for his drugs if he failed to obtain constipation in two weeks, and my point was proved by this constipation occurring on the tenth day. Though this case could be followed for only a few months, the difference between his response to this treatment and those previously used left no question as to the relative value of the treatment regardless of the permanency of the cure.

It has been my policy to put these patients on a soft diet to reduce the irritation of the bowels, and when the stools do not show some evidence of lessening in frequency and fluidity within a reasonable time I have added some other astringent such as tannigen. I have also experimented with increasing the bulk by adding barium equal in amount to the bismuth, when the amount of bismuth necessary for constipation was very great. After going a day without a bowel movement the patient is given castor oil, and the treatment immediately repeated, starting with



half the last dose of bismuth. Patients are instructed to repeat the treatment again in three months, and again at the end of one year.

I feel that the gradual constipation is more desirable than a sudden one for two reasons. First, with a sudden constipation from whatever means used, the purgation needed later might entail some danger of an ulcer perforating. Second, the gradual constipation not only gives the ulcer time to heal but also allows a daily estimate as to the degree of healing.

In the twelve cases mentioned, complete constipation, that is going over twenty-four hours without a movement, has occurred from the tenth to the fourteenth day. The series being small I am not claiming that this idea of treatment is 100 per cent curative, but the points in it have been well proved and no doubt any case, in which this treatment fails, would be helped by the combination of some of these drugs with other drugs and methods. One patient in this series has been fourteen years, the most recent patient two years, without recurrence. Another patient not included in this group has just been started on treatment, his history being bloody diarrhea for eleven years, the diagnosis made a year ago and failure of all popularly used treatments to relieve his trouble. As a matter of clinical interest I have been watching the accumulation of bismuth in the colon by fluoroscope, and have found that when bowel movements are reduced to one a day only the ascending colon showed bismuth retention, to some extent proving that complete constipation with bismuth is necessary for its action to be felt in all parts of the colon.

I am convinced that the above method is more efficacious than any of the old treatments, at the same time I must confess that I have not found it necessary to try any of the new ones.

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If you have specimens and want to put on a display in the scientific exhibits at the Augusta meeting, May 8-11, write to Dr. John W. Brittingham, Doctors Building, Augusta. Please mention the subjects and amount of space which will be required.

## ORCHITIS DUE TO MUMPS WITHOUT INVOLVEMENT OF THE PAROTID, SUBMAXILLARY OR SUBLINGUAL GLANDS

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### *Report of Case*

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GUY J. DILLARD, M.D.  
*Columbus*

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Specific parotitis is usually defined as "a general, specific, infectious and contagious disease with a characteristic localization in the parotid, less frequently in the submaxillary and sublingual glands. Metastatic complications may involve the genito-urinary, nervous, digestive, circulatory and endocrine systems." Other than the genito-urinary complications, I have seen, within the past few years, three cases of meningitis complicating mumps, all of which recovered.

Listed as rare complication are swelling of the labia majora, endocarditis, pericarditis, myocarditis, appendicitis, arthritis, neuritis, quadriplegia, inflammation of the facial, acoustic or optic nerves, iridocyclitis and disturbance of vision due to retinal congestion. Respiratory complications may be bronchitis, pneumonia, or edema of the glottis. Orchitis occurring as a complication of typhoid, tonsillitis, scarlet fever and such infectious diseases has been reported from time to time. However, in my experience, orchitis as a complication of such diseases is rare. Orchitis as a complication of mumps probably occurs once in every three cases and is of no particular interest. Specific orchitis, that is, mumps of the testicles, without involvement of the parotid and other glands about the mouth, is very unusual.

Walter Bieberbach and Foster Vider, in a recent report appearing in the American Medical Journal, state that they have reviewed the literature on this subject and were able to find only one text that reports sixty-four cases. Bieberbach and Vider added another case. In reporting such cases, one must be certain that his diagnosis is correct. There are many causes of orchitis, as is commonly known. The history of exposure in one who has never had mumps, the presence of an

otherwise unexplained orchitis, the absence of parotitis, and the subsequent development of a typical case of mumps in a member of the family not obviously exposed away from home, seems to be sufficient data to prove that specific orchitis exists.

The gross pathology of specific orchitis consists of diffuse testicular enlargement, an epididymus that is markedly enlarged and fairly soft without the presence of nodules, and a slight enlargement of the cord.

Microscopic pathology, which has been described by Wolbach of the Harvard Medical School and quoted by Bieberbach and Vider, is as follows: The process does not affect the testicle tissue uniformly. There are groups of seminiferous tubules which are completely destroyed and distended with exudate, separated by areas of normal and slightly affected tubules which contain large numbers of mitotic sexual cells, though there are few mature spermatozoa. The exudate in the destroyed tubules consist chiefly of polymorphonuclear leukocytes and phagocytic endothelial leukocytes. The cells of the tubules undergo hyaline degeneration, being taken up by phagocytic endothelial leukocytes.

The intertubular connective tissue is edematous and between the tubules most affected are coarse meshed fibrin, areas of hemorrhage and leukocytes. Among the groups of least affected tubules are normal epithelium but with lumina partly filled with leukocytes, as if the process were spreading along the lumina. There are many other tubules with lesions involving a small portion of the circumference which appear as if the process were extending from the intertubular connective tissue. The tunica albuginea is edematous with small hemorrhages and zones of cellular exudate about the blood vessels. The cells about the blood vessels are polymorphonuclear leukocytes and endothelial leukocytes. Liquefaction necrosis is not found in the tubules or connective structures. No bacteria or parasites are found in sections and films made at the time of operation. Blood culture and cultures from hydrocele fluid and testicular tissue are bacteriologically negative.

R., a white male, aged 32, a high school coach by occupation, was first seen in May, 1933. He had not been feeling well for several days and explained this feeling as "let down." Two days before I saw him he had participated in lifting a piano which he thought had produced a rupture. Two of his baseball players with whom he had been rather closely associated had been removed from the team one week previously on account of mumps. His past history revealed that he had had the usual diseases of childhood with the exception of mumps. He had had gonorrheal urethritis seven years previously, which was promptly treated and cured.

The examination disclosed the following: Temperature, 101 degrees, pulse 90, respiration 22. The eyes, ears, nose and throat were normal. Parotids and other glands about the mouth were normal in size and not painful to pressure. The opening of the parotid ducts were normal. Heart, lungs and abdomen revealed nothing abnormal. The left testicle was swollen twice its normal size, uniformly enlarged, slightly elastic in consistency and painful to pressure. The epididymus was markedly enlarged, fairly soft, with no evidence of nodules. The cord was slightly enlarged and tender. The right testicle was normal. No inguinal adenopathy was present. Urinalysis was negative. The prostate gland and seminal vesicles were normal in size and consistency, with no pain present.

Expressed secretion from the prostate gland and vesicles showed no evidence of pus or organisms. Two examinations of the expressed secretion at later dates failed to reveal any pathology. The blood count was normal except for a slight increase in the polymorphonuclear leukocytes (10,500). Blood smears failed to reveal any increase in the lymphocytes (relative increase ordinarily). Wassermann and Kahn reaction were negative. Blood culture was negative. Serum reaction for typhoid and undulant fever were negative. Seven days after the swelling began in the left testicle, the right testicle became swollen and painful. The treatment consisted of rest in bed and ice cap to the



elevated scrotum. Within two weeks of the onset the testicles were normal in size and recovery appeared complete. Shortly after this patient's illness, I was informed that one of the young children had developed a swelling in one side of his face. I immediately visited the child, but could not confirm a diagnosis of mumps; however, the parotids were slightly enlarged and the submaxillaries greatly enlarged. The mother was asked to have a pediatrician see the child the following day if the glands continued to swell. The following morning I was notified that the child's condition was unchanged. The mother later told me that she was uncertain whether the child's face had been swollen or not. Her anxiety was probably due to being asked to report any symptoms of mumps occurring in a member of the family.

About eleven days after I had first seen Mr. R., Mrs. R. became ill with a unilateral parotitis. A few days later the opposite parotid gland became swollen. She was unable to open her mouth to any degree for about three days. The general findings, course and convalescence were those of mumps.

The diagnosis of specific orchitis (mumps) without parotid involvement in this case seems reasonably certain. Typhoid and undulant fever and septicemia were ruled out by blood culture and agglutination reactions. The history, Wassermann and Kahn reactions rule out syphilis. Urinalysis, prostatic and vesicle examinations exclude the possibility of gonorrhea or other infections. The patient had never had mumps and was recently exposed. His wife developed typical mumps eleven days later; she stated that she had not been exposed away from home.

#### NEW MEMBERS FOR 1934

Adams, Charles, Cordele.  
Anderson, R. G., Atlanta.  
Bispham, Wm. N., Fort McPherson.  
Brown, J. R., Lavonia.  
Brown, Lester A., Atlanta.  
Brown, Samuel Y., Atlanta.  
Butts, Heber, Fort McPherson.  
Chapman, W. A., Cedartown.  
Clark, Jno. A., Fort McPherson.  
Cooke, S. L., Fort McPherson.

(Continued on Page 109)

## GASTRIC MUCIN IN THE TREATMENT OF PEPTIC ULCER\*

ERNEST F. WAHL, M.D.

*Thomasville*

The purpose of this paper is to call attention to a new treatment of peptic ulcer which has recently become available to all practicing physicians. The many unsatisfactory phases of all the older methods of treatment, both surgical and medical, cause one to welcome any new treatment which promises to be successful. A deliberate attempt is made to avoid the usually disputed views concerning the etiology of peptic ulcer and physiology of the stomach.

Early in the nineteenth century, Claude Bernard conducted experiments demonstrating the digestion of living tissue by gastric juice by placing the leg of a live frog in gastric contents. In 1810 Beaumont, a French surgeon, after watching digestion in the stomach of a soldier with an artificial gastrostomy from a gunshot wound, concluded that the stomach secreted mucus to protect itself from irritation. Pavlov and Heidenheim in 1890, following extensive experiments, were of the opinion that the role of gastric mucus was to neutralize acid and act as a mechanical protection. Professor Ivy of the Northwestern Medical School demonstrated that a layer of mucus one millimeter thick would prevent peptic digestion for 16 hours. If the mucus was wiped from the surface the application of gastric contents produced a hemorrhage. These experiments suggested to Fogelson that mucus was an ideal therapeutic agent in peptic ulcer. It is a natural substance which normally plays a soothing, protective and lubricating role to the mucous membranes. It combines readily with acid and its secretion or ingestion causes no chemical disturbance in the body and no unfavorable effect on gastro-intestinal motor or secretory activity.

Fogelson obtained a satisfactory product from the mucosa of hog's stomach. Experimentally, this was shown to have high com-

\*Read before the Macon Medical Society, Macon, October 17, 1933.

binning power but did not alter gastric secretion. Two ounces of mucin were found to completely neutralize the acid from histamine stimulation. Mucin mixed with meat neutralized the acid in dogs' stomachs which meat alone did not neutralize. Atkinson found that mucin did not always control the gastric acidity in ulcer patients although the symptoms promptly disappeared. This is partly explained by the fact that some of the first mucin manufactured was contaminated by a secretagogue, probably histamine. Approximately 60 per cent of patients and animals with complete biliary fistulas develop duodenal ulcer. Kim and Ivy prevented duodenal ulcer formation in all seventeen of their dogs with biliary fistulas by feeding 15 grams of gastric mucin twice daily.

Clinical results as shown by published records have been comparatively uniform. Fogelson obtained strikingly good results in 106 out of 113 cases. Of these 56 had experienced unsuccessful surgery or had been refractory to other forms of treatment. Atkinson treated 85 cases including 11 unsuccessfully operated upon. All became symptom free in an average of 2.2 days. Brown treated 37 intractable cases of which 21 were hospitalized. Thirty-six were symptom free in an average of 8 days. There was only one failure. Block and Rosenberg, impressed by the uniformly good results reported, studied 30 cases with the express purpose of attempting to determine the limitations of mucin as a therapeutic agent. Six patients refused to continue treatment because of the taste and consistency of mucin. Eight patients were unimproved in three to twelve weeks. Six patients improved but had a relapse while taking mucin. Seven intractable ulcers responded quite favorably. Diarrhea, nausea, vomiting, abdominal cramps, increased pyrosis, anorexia and abdominal distention and fulness after meals were symptoms frequently mentioned by the patients in this series. It is interesting to note that a great many of the patients in each series had had repeated recurrence of symptoms on other forms of medical and surgical treatment and only a very small number received treatment for the first time.

Smithies treated 37 cases with mucin and concluded that there was no logical reason for using the preparation. He felt that the cost and physical characteristics were sufficient to abandon its use and that the reported benefits could be explained by the bland diet prescribed with the mucin and the tendency of ulcers to have remissions.

The first change to occur under mucin treatment is usually a disappearance of night pain. Experiments have shown that a patient may be symptom free and have a negative acid test although complete anacidity was not obtained. Vomiting usually ceases immediately and the diurnal pain on the second or third day. Occult blood in the stools seldom persists after the ninth day. Abdominal cramps and eructations usually disappear during the second week. Not infrequently patients are free from all subjective symptoms after the third or fourth day. In patients with chronic ulcers of long standing, the gain in weight and increase in hemoglobin is often striking.

One hundred grams of mucin is given to each patient daily. The most satisfactory method of administration is to mix one hundred grams of mucin in one and a half quarts of whole milk, flavor to taste, and divide into twelve doses to be taken hourly. When this routine is impossible, two level tablespoonsful are given at 10 A.M., 2 P.M., 4 P.M., 8 P.M., and 10 P.M. At first two 00 capsules of mucin were given every hour during the day except when the large doses were given, but this method was later discontinued because the capsules tended to cling together, forming a very slowly soluble mass in the stomach. In very severe cases mucin should be given each hour during the day.

In rare instances, mucin may cause some nausea and vomiting but if this should occur, do not stop the mucin. It seldom continues after the third day. Patients on mucin treatment should not receive alkalies in any form. Those who have been taking large amounts of alkalies sometimes experience very severe heartburn when the alkalies are withdrawn, but if this becomes intolerable the stomach may be washed with tepid water until clean. Stomach washing is usually needed at night



but is seldom necessary after the fifth day of mucin treatment. Mucin itself does not cause heartburn. A few patients experience extreme flatulence at the beginning of mucin treatment but this is usually controlled by pushing belladonna to the point of tolerance and reducing the carbohydrate in the diet.

Patients on mucin therapy are given a bland diet, much the same as Sippy used after the fourth week. When possible, I prefer five small meals a day. At all times I warn against overloading the stomach. Mucin treatment is too new to make it possible to estimate the average length of time necessary to cure an ulcer. Furthermore, each peptic ulcer will probably continue to remain an individual problem. Mucin treatment should be continued for six months regardless of the patient's condition. Routine treatment as described above should be followed for three months. If the patient is completely symptom free, is gaining weight and strength, the amount of mucin may be gradually decreased. Regularity in the hours of administration should be continued since the principle of treatment is based on the continuous presence of mucin in the stomach. Some patients remain symptom free on twenty-five grams of mucin daily after six months, while others have a recurrence of symptoms on less than ninety to one hundred grams daily.

Nine cases have been treated under my direct supervision. Ten other cases were seen in consultation and started on mucin therapy. The entire group was made up of five gastric and fourteen duodenal ulcers. The periods of treatment have varied from four to eighteen months. One patient with a duodenal ulcer of twenty years' duration became symptom free except for slight epigastric burning at 4 P.M. and 5 P.M. No other treatment had ever made him as entirely free from symptoms. One white female, age 24, with a gastric ulcer became symptom free for six weeks and then developed constant burning from the mouth to the umbilicus which could not be controlled with mucin. Hyperacidity was not present. Four patients had an extreme degree of flatulence for several weeks. One patient had extreme flatulence and epigastric burning for three weeks. Otherwise

the response to mucin treatment was very satisfactory. Although the present series is too small to be of statistical value, I feel that mucin therapy is more satisfactory than any other treatment previously recommended for peptic ulcer.

In conclusion I wish to point out some dangers which are almost certain to appear unless the manufacture of mucin is carefully controlled. Most of the mucin used thus far in experimental work has been made by the Wilson Laboratories in Chicago under the supervision of Dr. S. J. Fogelson, Northwestern Medical School. Their product has been constantly purified until at the present time it is free from secretagogues. We are all familiar with the innumerable companies manufacturing liver extract for the treatment of pernicious anemia, many of which are impotent. It is possible that many cheap ineffective brands of mucin will flood the market in the near future.

#### PERFORATED PEPTIC ULCER WITH INTERMITTENT LEAKAGE

Harry A. Singer, Chicago (*Journal A. M. A.*, Jan. 13, 1934), believes that knowledge of the clinical behavior of a perforated ulcer with intermittent leakage is essential if mistakes in diagnosis and management are to be avoided. A number of "medical" disturbances, including disease of the gallbladder, penetrating ulcer, coronary thrombosis, tabetic crises and diaphragmatic pleurisy, are erroneously diagnosed. Should the unrecognized perforation be securely closed, the recovery will generally occur in spite of food intake. If, on the other hand, owing to the administration of food, adhesions that originally sealed the hole are torn and further leakage is permitted, the symptoms and signs are usually sufficiently definite to lead to a diagnosis of "surgical abdomen" and to operation. As the true cause of the symptoms under these circumstances is not known, the initial incision is often improperly placed. The diagnosis can generally be made by eliciting a careful history. The occurrence of a periodic, rhythmic pain characteristic of ulcer over a period of months or years is frequently obtained if pertinent questions are asked. An account of violent pain indicating the occurrence of perforation followed by mild postperforative symptoms is usually forthcoming but often requires adequate interrogation. It is necessary to have the patient relate the story minute by minute and when this is done it is surprising how accurately even patients with limited intelligence can recall each step in the development of the illness. Roentgenograms are often of value in establishing the diagnosis by permitting visualization of free air. However, the absence of a spontaneous pneumoperitoneum, particularly in these cases with limited leakage is not uncommon and does not militate against the diagnosis of perforated ulcer. The treatment of cases with intermittent leakage follows the rules accepted for ruptured ulcer in general. Since there is a tendency toward spontaneous closure in most of the instances presenting intermittent leakage, those principles recommended for the treatment of forme fruste perforations are particularly applicable.

## ACIDOSIS\*

O. F. COLLUM, M.D.

*McRae*

Most of the recent information given to the profession on acidosis is of such a bio-chemic nature that it is difficult for the average physician to understand. Therefore, what I include in this paper is not for the purpose of enlightenment, but to present the subject in a practicable way which may be useful in our daily routine, and to remind you of the importance of being on the constant watch for this very frequent and often serious condition, especially in infants and children.

Normally the blood plasma is kept alkaline by the alkaline reserve, principally the bicarbonates, phosphates and proteins. In the process of metabolism and the many-changing conditions and activities in life, reactions must necessarily occur to bring about an increase in the acidity or a reduction of the normal alkalinity of the blood stream.

If, from birth, we could be so fortunate as to have the correct amount of food, carrying just the exact amount of proximate principles which the system needs at all stages of life and under all the changing conditions met with through life; if we could take at all times just the right amount of exercise to meet the required needs of the body; if our respiratory system could always perform to meet the demands; if our kidneys could function in accordance with the demands made upon them; if the bowels and sweat glands, together with all the emunctories of the body, could always perform just as nature intended and we could escape all infections, there could be no such thing as acidosis.

This ideal, however, cannot be maintained long, even in infancy, and much less so throughout the span of human life and, therefore, we all become liable subjects to this symptomatic disease. Especially is this true in this age, when adults and particularly mothers, who leave their babies to the care of others while they go in restless pursuit of pleasure, fame and wealth. And, for this action they are made to pay the penalty in

this form of disease, many times too mild to be noticed, but frequently so severe as to produce death.

Fortunately, in this disease as well as most others, nature has thrown about us some safeguards which protect us from the development of this condition at every cross road. The four chief safeguards in the order of their importance are as follows:

1.—Natural reserve of bicarbonates in the plasma, the phosphates of corpuscles which act as buffer salts.

2.—Deeper breathing to exhale more carbon dioxide.

3.—Increased production of ammonia excreted as urea.

4.—Sweating and hyperurea to eliminate acid phosphates.

These four safeguards are compensatory and, unless the organs from which they derive their aiding forces are below normal in their functioning power, become much more active at the approach of an acid condition of the blood until a sufficient amount of acid has been eliminated to restore the blood to its normal alkaline state.

Many times these compensatory safeguards, acting singly or in combination, restore a beginning acidosis to normal without the aid of any therapeutic measures and the condition is past without ever having been discovered. This compensatory action, however, is unable to control a more severe and active condition, due either to reduced alkalinity, increased acidity or both, and then it becomes our duty as physicians to learn the reason and suggest the remedy.

*Etiology*

To mention the individual causes as given in text books would require more space and time than a paper of this nature would permit and, therefore, becomes impracticable here. But, instead, I would like to list them under the following three heads:

1.—Increased acid production, living on fats without sufficient carbonates to insure proper burning of fats resulting in the production of large quantities of poisonous fatty acids as in diabetes, starvation, violent exercise and high temperatures causing increased metabolism, infections and toxic conditions of all kinds.

\*Read before the Telfair County Medical Society, Lumber City, January 9, 1934.



2.—Decreased elimination of acids, as in anurea of dehydration, nephritis and all kindred diseases of the kidneys in which there is not a sufficient amount of urine to carry from the system the accumulated acid phosphates; all acute and chronic diseases of the respiratory system disabling the lungs in their effort to rid the system of the ever-accumulating carbonic acid; embarrassment of heart action preventing it from sending the proper amount of blood through the lungs to receive oxygen in exchange for carbon dioxide and failure of the sweat glands from any cause.

3.—Loss of alkaline reserve, as in the drainage of a watery diarrhoea—most frequent in children; persistent vomiting from any cause, especially from pregnancy, rectal feeding, esophageal strictures, hemorrhages, and the giving of such foods as do not carry adequate amounts of matter from which the blood stream can appropriate the required amount of bicarbonates, phosphates and protein to maintain this reserve.

Dr. Cornell, a prominent pediatrician of Columbia, S. C., divides this disease into five types:

1.—Simple symptomatic acidosis which occurs in mild febrile conditions with slight starvation.

2.—The mild type of acidosis seen after a period of starvation, usually after operations and especially in those who have been put on a restricted diet for long periods before operations.

3.—Acidosis following infections which overwhelm normal metabolism, such as the so-called alimentary type of influenza, otitis, pyelitis and lung infections.

4.—The dehydration type of acidosis, due most often to the drainage of a watery diarrhoea and anurea with retention of acid phosphates and urea.

5.—The fulminating type of the disease which is perhaps a combination of types three and four. The infection is so severe in this type that it usually kills before we are able to recognize it.

#### *Symptoms*

The symptoms of this disease are not many, but are characteristic, so that a careful study of the symptoms arising in suspected

cases will confirm or deny the presence of this disease. The following symptoms are the most typical of acidosis: Hyperpnoea (air hunger) often preceded by deep sighing, restlessness, thirst, vomiting with little or no nausea, cherry red lips, no cyanosis, acetoneuria (sweetbreath), less carbon dioxide in respired air, a burning pain in the larynx and the epigastrium, lassitude, various nervous manifestations, headache, increasing drowsiness and final coma.

#### *Treatment*

In order that we may administer the proper treatment in this condition, it is necessary to determine which of the three outstanding causes is present. In the case of an increased production of acid in which the patient is living almost entirely on fats or his own fats (starvation), the treatment becomes obvious at once. In addition to giving alkalies for rapid temporary relief, large quantities of water should be given to dilute the acids and supply the needful minerals. Carbohydrates are most essential for a lasting and curative effect. The introduction of carbohydrates into the system causes the proper burning of fats and prevents the formation of poisonous fatty acids. If these measures are successfully carried out, nature will rapidly eliminate acids already formed. The too-free use of alkalies may cause an alkalosis which will occasionally be followed by tetany.

As to the method of administering carbohydrates, there can be no doubt that the intravenous use of glucose is the most rapid and effective. In the case of infants, teaspoonful doses of orange juice, weak solutions of Karo syrup or honey, given every three to five minutes will usually accomplish the desired results if persisted in until a hundred or more doses have been given. Failing to get sufficient water by mouth will necessitate resorting to hypodermoclysis, proctoclysis, intravenous or intraperitoneal methods. Insulin, of course, should be given to the diabetic patient. And you will be happily surprised many times with the giving of large quantities of carbohydrates with small but frequent doses of insulin in that type of acidosis resulting from the pernicious vomiting of pregnancy.

In those cases resulting from decreased elimination of acids it becomes imperative that we secure free diuresis and diaphoresis, and also fill the system with alkaline fluids. This can best be done by giving alkalies, large quantities of water and hot packs. Inasmuch as acid conditions of the blood always stimulate the respiratory center to its greatest capacity, there is nothing that we can add that would bring about a freer elimination of carbonic acid, except perhaps, placing the patient in a large, airy room. Restoration of compensation to a failing heart will relieve those conditions consequent upon this cause.

When a patient is losing or has lost his alkaline reserve from the constant drainage of a watery diarrhoea, excessive vomiting or improper feeding, from which the system is unable to obtain the necessary elements with which to replace these losses, it becomes necessary to supply large amounts of water to overcome the dehydrated condition which is almost always present. If alkalies are given for temporary relief and followed with carbohydrates, in the majority of instances, without the use of any drugs to check the diarrhoea, you will be rewarded with pleasing results.

In those cases resulting from prolonged ether anesthesia, give fluids freely and solutions of glucose intravenously. Removal of foci of infection should be practiced if the acidosis can be traced to them.

#### DINITROPHENOL: ITS THERAPEUTIC AND TOXIC ACTIONS IN CERTAIN TYPES OF PSYCHO-BIOLOGIC UNDERACTIVITY

Jules H. Masserman and Harry Goldsmith, Baltimore (*Journal A. M. A.*, Feb. 17, 1934), studied the pharmacologic and psychotherapeutic effects of sodium dinitrophenol in eighteen patients whose psychobiologic status was characterized by sluggishness, passivity and apathy. In therapeutic dosage the drug caused a mean rise of  $32.9 \pm 3.31$  per cent in the rate of oxygen consumption and a mean weight loss of 0.92 pound (417 Gm.) per week. Toxic effects occurred in five cases and were characterized by a fall in blood pressure, tachycardia, acidosis, progressive stupor and one death. Indeterminate or adverse psychotherapeutic effects were observed in eight and four patients, respectively, while six patients showed a definite improvement in their mental state, apparently attributable to the medication. Dinitrophenol is therefore unpredictably toxic to some patients, but its careful administration may be of empiric benefit in certain types.

#### ADEQUATE MEDICAL CARE\*

W. D. GHOSTON, M.D.  
*Danielsville*

Public interest in the question of adequate medical care and its cost has probably never been keener than at present. A new America is in the making. The medical profession has been undergoing dramatic changes in the last twenty-five years. It is up to each physician to grasp every opportunity to lead in these new advances. "We have great medical schools and libraries constructed, millions of dollars invested in hospitals, thousands of nurses and technicians. The operation of the machinery of modern medical practice requires great administrative skill and expenditures."

"The physician can no longer be independent of these great agencies. He must learn from well-balanced experiments how to perform the important task for society without losing that splendid relationship between doctor and patient that is so vital in the care of the sick."

"The doctor must recognize that whether he likes it or not something is going to be done. It is better to have it done by him than to him. We are up against certain forms of state medicine at this time. The more local we can make the conduct of these medical enterprises, the better they are going to be. We should fear decisions made by legislative groups with authority and with funds."

The problem of providing adequate medical care can be illustrated by a very tangible human situation. Mary Jones is awakened in the night with a pain that may mean appendicitis. The Smiths down the street are expecting a baby. The Italian family around the corner is worried because little Rose has no appetite and seems to be losing her strength and vitality. What are they to do? All of them know in a vague sort of way, perhaps, about a great pool of medical knowledge waiting to be tapped. They know the doctor down the street has been to

\*Read before the Tenth District Medical Society, Hartwell, August 9, 1933.



New York and has a fine reputation; but they aren't on friendly terms with him, and besides, they don't know what his charges will be. Perhaps the druggist can fix up some medicine that will do the trick. Then there is the chiropractor up the street. Mrs. Brown goes to him, and he doesn't charge much. The problem that these families face is crucial. One decision will lead them quickly to scientific medical service; others will cause delay or may completely block their avenue to this pool of knowledge. The problem, therefore, is to devise the kind of an organization which will, as far as possible, insure that patients reach the proper hands and obtain good service when they get there.

Two things are needed: First, a continuing, close personal relation between the medical organization and the consumers of medical service; and second, financial arrangements that facilitate prompt attention to the first signs of distress and use of full preventive services. The provision of adequate scientific medical service to all the people, rich or poor, at costs which can be reasonably met by them in their stations in life, is of vital concern to everyone. Thousands of persons, even in "good times," try to get along without the medical service they need. Hundreds to thousands postpone seeing the physician or dentist or going to the hospital because they are afraid the charges will be too high. Even among the wealthy it is only a small percentage who obtain all the preventive care they need. This lack of adequate medical service lays a burden of pain, suffering and inefficiency on this nation which, rich as it is, exceeds what we can afford. The question which faces the American people in the next ten years is not whether we can afford to provide ourselves with satisfactory medical service, but rather, whether we can afford to provide less than adequate medical service to all. Two years ago the Committee on the Costs of Medical Care faced this question and decided that the objective was adequate medical service to all. It seems to me that decision was sound and of far-reaching importance. From the beginning some of us have stressed that we wanted to build a better system of medical service on existing founda-

tions. Medicine has grown steadily and fruitfully in the last two centuries. Much has been learned that must not be forgotten.

Before presenting the specific recommendations, I think we should emphasize the significance of satisfactory medical service. After a great deal of discussion we agreed that a satisfactory medical service is one which fully meets the following essentials: (1)—safeguards the quality of medical care and preserves the essential personal relation between patient and physician; (2)—meets the true needs of substantially all the people; (3)—provides service on financial terms which the people can and will meet without undue hardship either through individual or collective resources; (4)—fully utilizes known preventive measures; (5)—assists and guides patients in the selection of competent practitioners and facilities; (6)—finally, provides adequate and assured payment to the individuals who furnish service. Unquestionably many physicians are decidedly underpaid for the work which they do and the heavy responsibilities which they undertake. Furthermore, even some of those who have larger incomes are under a constant strain, due to the precariousness and uncertainty of the future. In our plan we have hoped that there could be worked out a system by which the doctor could keep himself up-to-date mentally by going away for study and physically by having adequate vacations. These then, are the essentials of a satisfactory medical program. While they are broad and general in character, there are many specific plans that can be worked out to meet practically all of them.

"With the present state of agriculture, particularly in the southern states it does not seem likely that any form of rural medical care can be carried out without support from the state or elsewhere."

The House of Delegates of the American Medical Association at Milwaukee, June, 1933, made the following resolution which was adopted on recommendation of the Reference Committee on Public Relations: Resolved That the House of Delegates of the American Medical Association endorse the Minority Report of the Committee on the Costs of

Medical Care as expressive, in principle, of the collective opinion of the medical profession.

In adopting this resolution neither the Reference Committee nor the House of Delegates gave approval to any particular plan that has been anywhere proposed, but rather, expressed approval of the Minority Report, "as expressive in principle, of the collective opinion of the medical profession."

The recommendation of the Reference Committee on Medical Economics was also approved at the same time.

By the term "contract practice," as applied to medicine, is the carrying out of an agreement between a physician or a group of physicians as principals or agents and a corporation, organization or individual, to furnish partial or full medical services to a group or class of individuals for a definite sum or for a fixed rate per capita.

Contract practice *per se* is not unethical. However, certain features or conditions, if present, make a contract unethical, among which are: (1)—When there is a solicitation of patients, directly or indirectly. (2)—When there is underbidding to secure contracts. (3)—When the compensation is inadequate to assure good medical service. (4)—When there is interference with reasonable competition in a community. (5)—When free choice of a physician is prevented. (6)—When the conditions of his employment make it impossible to render adequate service to his patients. (7)—When the contract because of any of its provisions or practical results is contrary to sound public policy.

The Georgia Medical Society of Savannah in December, 1932, passed a resolution rejecting the Majority Report of the Committee on the Cost of Medical Care and endorsed the report of the Minority.

"The first of the six chapters of the Report describes the needs and problems of medical care from the points of view of the professions furnishing it and of the public, as revealed in the Committee's fact-finding studies. The second chapter lays down six essential elements to any satisfactory medical program. (1)—Safeguarding quality of

service and personal relationship between physician and patient. (2)—Provision for meeting the people's real needs for medical care. (3)—Provision of service on financial terms which a substantial majority of the people can and will meet, either through individual or collective resources. (4)—Shift of emphasis from cure to prevention. (5)—Selection of competent practitioners. (6)—Adequate payment of practitioners and agencies."

"Think what it would mean if we could give everyone who needs medical attention the kind of medical attention that is possible; give it to him on a basis that maintains his dignity and his self-respect. Think what this would mean in happiness if we could get a spread to all of our people of what medicine can do."

"There is something wrong in the country where provision is not made for 80 per cent of the people whose incomes are insufficient to supply them with proper medical care during serious illness. Of course, the medical profession does the best it can, as it thinks, but there is something wrong with an organization that does not make definite provision for the care of serious illness of 80 per cent of our people. The medical men all agree that patients should have access to good facilities, that the personal relations between doctors and patients should be maintained, and that the costs of medical care should be within reach of everyone who needs the care; in other words, the costs should be in some way distributed so every patient who needs it can have it.

"As to group service, there is great fear on the part of many in the medical profession that the domain of the individual doctor might be encroached upon, that the doctors would come under lay control, and that the personal relations of doctor and patient would be interfered with. When it comes to group purchase there you run up against one of the things that immediately excite fear of state medicine on the one hand and of compulsory insurance on the other. This violent opposition, talk of Socialism, talk of Communism, as we have heard, results large-



ly from the bad patterns of group purchase that were established at first in Europe when the attempts were made to distribute costs. In European countries the mortality rate has not decreased under their insurance systems. In the second place, the average number of illnesses has increased. In the third place, the average duration of illness has increased under the insurance system; and in the fourth place, some wholly new diseases, namely, the compensation neuroses, have come as a result apparently of these laws.

"However, as bad as it has been in Europe, bad as some of their patterns established have been, the average care of the sick is better than it was before insurance was introduced. The average income of the doctor is larger than it was before; and, a third point, no country that has resorted to the principle of insurance has given it up. Those three things must be remembered. Recently medical men have seen that some kind of insurance was inevitable and have helped to form new patterns of health insurance, tried to protect both the public and the profession, and tried to keep medical control of the purely professional aspects of the work. Let the doctors lead in this and try to determine the policies and make them good, instead of bad. I welcome the criticisms of group practice, of the community center, of voluntary insurance. I see the danger of new evils and they have vividly portrayed them in their reports. Their emphasis on the county society is worth listening to. What the Milwaukee County Society has done might be imitated in other places. These Minority reports and single statements ought to be very helpful.

"Sickness is an emergency and we know quite well in other fields how to provide for emergencies. We insure against fire hazards and automobile accidents. The cost of medical care could be fully and completely solved by an application of the same principle. This is why the Committee 'recommends that the costs of medical care be placed on a group payment basis, through the use of insurance, through the use of taxation, or through the use of both these methods.'

"Good medical care must center first of all about the service rendered to the individual by a family physician, who knows that family intimately and considers the health problems of its individuals from a standpoint of broad knowledge and individual experience. This type of family service is becoming more and more rare, and there is not only waste but actual harm to health involved in sending the patient from one specialist to another in our large cities.

"We agree, all of us, very fully with the need for rehabilitating the general practitioner, but we also realize that that cannot be done by talking about it. The only way it can be done is through the development of some form of organization which will encourage the use of the family practitioner. But, of course, the family practitioner alone cannot meet the needs of modern medical science. The days of what Dr. Wilbur has called 'saddle-bag medicine' are past. Today we must have specialists available for consultation, and specialists of many kinds. We must have laboratory services, technical assistants, physiotherapeutic devices of varied types.

"The minorities object to contract practice whenever it operates in restraint of opportunity for all competent and reputable physicians in the community, or results in unfair competition or furnishes inferior medical services. The same objections are made to pay clinics when operated for profit by laymen as 'exploitation of the public and of the medical profession,' through inferior quality of service with no lessening of the costs of medical care to the patient who must add operative charges to the normal or average fee prevailing in the community."

The minority claims over-emphasis upon the virtues of group clinics and cites in opposition the large number of groups treating patients under workmen's compensation laws, in active competition one with another, "soliciting patients through paid agents." Many of these groups are under lay control—keeping down costs by employing physicians of low ability, commercializing medical practice, lowering ethical standards, demoralizing

physicians into undignified advertising in factories reminiscent of the old lavatory pasters, leading physicians to compete for practice by buying cases for one-third or one-half of their fees and, in collusion with agents, prolonging treatments far beyond reasonable limits and padding their bills, as developed publicly by the Seabury investigation and not denied.

The minority objects to the influence of this Committee being used in the promotion of new forms of political authority, feeling that the unsatisfactory operation of the forms of compulsory sickness insurance now carried on in forty-four states under workmen's compensation laws has degenerated into racketeering in our large cities and should lead to real revision of these operations and carry them into the administrative hands of those who represent the higher medical honor and higher medical intelligence of the community. Here the hospital or medical center may furnish the place and the skilled staff service all of which should be amply paid for.

"The minority objects to the large medical center as projected by the majority on the ground of exclusion of many physicians, of oppressive competition, of big business technic erecting machinery which eliminates personality and destroys personal relations by factory forms. Mere bigness is often a liability.

"The minority recognizes the practicability of centering medical service in small places where there are only one or two hospitals and where all of the physicians of the community are permitted to use all of the facilities of the hospitals in a true community spirit, the institution being supported by taxation or by gifts. Places where there are no hospitals and few physicians, dentists, or nurses, must be served in other ways with the entire health service of the country concentrated upon ways of distributing urban surpluses into neglected fields.

"The minority favors continued study of group practice, co-ordination of the medical, dental, pharmaceutical, hospital, and nursing professions, the study of the application of the insurance principle to the accumulation of reserves, and to the assurance of solvency of institutions.

"No arguments demonstrate a quality of service, in countries where compulsory health insurance prevails, which is superior to admittedly inadequate and badly distributed service now operating in the United States.

"The minority feels that our government has strained paternalism far beyond moral justification in the extension of veterans' hospitals and in the hospitalization of veterans with non-service disability and has spent the people's money with inexcusable recklessness. This sorry exhibition should make us all shy of government invasion into control of any phase of medical practice except, of course, in the field of public health and in the institutional care of those unemployable of the state—the tuberculous, the insane, the feeble-minded, or the hopelessly crippled.

"The 'challenge of the future' in the majority report is a vigorous, stimulating statement that the work is not only not finished but only just begun, and that continuous wide-spread efforts must be carried on through all medical, educational, and all other agencies whose interest leads them earnestly to desire the prevention of disease and the general health of our people."

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#### OVARIAN THERAPY: RELATIONSHIP OF FEMALE SEX HORMONE TO HEMOPHILIA

The work of Jacob Brem and Jerome S. Leopold, New York (*Journal A. M. A.*, Jan. 20, 1934), does not support the theory of the close relationship of the female sex hormone to hemophilia: 1. They have not been able to demonstrate the presence of the estrogenic substance in the urine of normal males. If the female sex hormone holds hemophilia in abeyance, it should be present in the urine of all normal males rather than in isolated cases. 2. The commercial estrogenic substance employed by the authors, of known potency, failed to reduce the coagulation time of the blood or stop the several hemorrhages in their hemophiliac patient. It would seem that symptomatic treatment and blood transfusions are still the methods of choice in hemophilia.

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Public health organizations have educated the public and are now practicing medicine. Lay organizations with huge supplies of money have developed the "socialization of medicine" idea and are ready to be altruistic at the expense of the private physician.

The Bulletin of the Medical Society of the County of Kings, Brooklyn, N. Y., February, 1934.

The members of this society are planning to take vigorous action at once.



## ON THE RELATION OF PHYSIOLOGY TO CLINICAL MEDICINE\*

O. S. GIBBS, M.B.† EDIN.

*Washington, D. C.*

When I was invited to address you I had difficulty in writing the usual formal reply of acceptance, for I may say without any hesitation I consider it not only a privilege, but also a real pleasure to do so. Furthermore, I feel that considerable benefit is derived by the laboratory man keeping in touch with his clinical colleagues, and it seems not unlikely the reverse is also true, in spite of the good natured joking to the contrary. Of course, in medical school, it is imperative that there should be no real gap between laboratory and clinic; no greater, in fact, than the usual technical hiatus between surgery and medicine, or medicine and obstetrics, and for the simple reason that we are all engaged in the same task, that of reducing the young lay mind into a sufficiently plastic condition, and then moulding it into as nearly as possible the superior intellect commonly possessed by us doctors. This should be a continuous process which can only be achieved by a knowledge amongst the various teachers, trainers, or, as I feel sometimes, sculptors associated in this work, of each others' limits and limitations.

Apart, however, from this aspect of the case, we have always with us medicine as a glorious and living storybook in which, almost from day to day, new and exciting adventures take place. It seems proper, therefore, that we should have occasion to swap tales with each other. Tales of lost hopes, of explorations that failed, or of others that were crowned with success; of messengers coming from the borders of our ever increasing domain with news of something yet further beyond. Tales of new efforts to improve old methods, and tales of the great ones living in our empire.

That, gentlemen, is what I believe is one of the main purposes of such societies as this. The swapping of tales!!! Indeed, in my experience, only the smoking room of a trans-Atlantic liner can hope to compare with a medical society.

Tonight, therefore, I propose to tell you something of the recent doings in a little piece of the jungle commonly known as physiology. May I be forgiven if this story is not, perhaps, of immediate clinical importance; yet at any moment it may become so, and I venture to think it is at least interesting.

Once upon a time the body developed and grew, matured and functioned, either by a mysterious process called natural development, or equally obscurely inherited disposition! Or other names. Then there was animal spirits, not to mention those charming fuliginous vapors.

Harvey was probably the first definitely to make a clearing in this wild jungle and founded the first city dedicated to function as a strictly objective study. The discovery of nerve impulses was the foundation stone of a series of huge cities in which the inhabitants busily studied all forms of activity in relation to the nerve impulse conception.

Then came doubts. Did the effects produced by stimulating a nerve always follow the classic idea, or was it more complicated still? In 1906 Howell noticed that stimulation of the vagus was able to produce effects on the heart which were unduly prolonged and he thought that this was explained by the liberation of an unusual quantity of potassium which was known to be depressant. Earlier than this the late W. E. Dixon, in 1902, had the idea that the effects of the vagus might be due entirely to the liberation of some active chemical at its ends. He, however, dropped the idea in face of considerable discouragement.

Sherrington in his classic and beautiful work on the reflex activity of the cord began to suspect that certain reactions, such as super-position of minimal stimuli, could best be explained by the formation of some chemi-

\*Read before the Richmond County Medical Society, Augusta, March 16, 1933.

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cal materials having stimulant properties within the cord itself.

Before this, however, great armies were busy clearing and building in a wonderful new part of our country. Schafer and Oliver had at the beginning of this century brought back from one of their explorations a wonderful and amazing new prize. Indeed, they might well have sent it back on its own feet since it was later called hormone, or messenger. This discovery opened our minds clearly to the fact that highly active chemical compounds are made in the body and help to control its activities.

The discovery of epinephrine, however, started a new line of thought, for it was rapidly noted that this substance had exactly the same properties as stimulation of the sympathetic part of the autonomic system, and the idea gained ground and credence that the production of this hormone was to potentiate and prolong the effects of nerve stimulation. This is especially brought out by Cannon in his continuous and fascinating studies. Thus we had growing together two ideas, two settlements in the woods. The one, that functions are under control of chemicals. The second, that chemicals can intensify or even supplant nerve impulses.

The idea grew so that nerves began to lose their domination and became merely the method of producing rapidly an action. Whereas chemicals are the means whereby slower and continuous reactions are achieved. Evidence in favor of this view enormously multiplied. Thyroid, discovered earlier, took on a new meaning. The well-known effects of castration became readily interpreted. Hormones, in fact, became the dominant party in the physiologic world. Today their functions are immense. Pituitary becomes the controller of our growth, sex maturity, water balance, and, if you happen to be a frog, even your colour. The parathyroids control calcium deposition and possibly tissue growth. The pancreas, the burning and storing of your energy fuels. The adrenals, the tone of vessels, their permeability and your resistance to shock. While the gonads! Your dreams, your bank account, the number of safety razors sold, and the length of

your life! Even now folk imagine that the old man may become again filled with the ambitions of youth, and the old lady—almost a virgin again!

In the midst of this amazing growth the nerves began to become a little neglected. A little uninteresting, but in spite of the hints, the signposts, and even the suggestions of men like Sherrington and Cannon, attention was not seriously focused on the possibilities of a chemical control of even the nerve impulse itself.

One night Loewi, unable to sleep, began to wonder about these things, and the idea now ready to bear fruit came so strongly into his mind that at four in the morning he went to the laboratory and by seven o'clock that day had established the fact that stimulation of the vagus nerve liberated a something which could be washed out, and reproduce in another organ the effects of vagus stimulation. Naturally nobody believed him, especially as he worked with the very lowly frog. Undeterred, he persisted, and pieced together an amazing bit of our great jigsaw puzzle. Suppose, he said, we have, on stimulating a nerve, something liberated which actually causes its effects. Then clearly it must be rapidly destroyed normally, or its effects will persist unduly. What is there that will reproduce vagus action, but is destroyed rapidly? Pilocarpine, muscarine, acreoline, choline? Acetyl-choline! Acetyl-choline made by Hunt and Taveau many years ago, investigated by Dale, 1914, who pointed out the wonderfully faithful representation of a parasympathetic stimulus given by acetyl-choline, and also that its action was very evanescent owing to its destruction. So Loewi tried acetyl-choline; he compared it carefully against his "vagusstoff" and in all respects it appeared the same.

Why was it destroyed? Loewi then showed that a suggestion of Dale was right. Acetyl-choline is an ester (fat). In the blood and tissues are enzymes that destroy esters, and especially rapidly do they destroy acetyl-choline. Another bit of the puzzle in. Then came a master stroke! Long ago, Cushny pointed out that physostigmine or eserine, did not really stimulate the parasympathetic



but prolonged the effects of a stimulus. To Loewi, now strongly on his way of discovery, this suggested the wonderful possibility that perhaps physostigmine acts by preventing the blood and tissue enzymes destroying the parasympathetic hormone. And it does. Not only does physostigmine act on these esterases but on others too, and in a dilution of 1:50,000,000. This discovery now made it possible not only for Loewi but others to hunt this elusive and delicate fairy with more hopes of capture. No longer could it beckon you on, and then, will-o'-the-wisp-like, disappear into thin air. By physostigmine we had put chains on its feet, and it must now submit to a closer inspection.

The hunt proceeds. Englehart isolates parahormones from the eye, oculo-motor-stoff. Babkin, Szelozey, Wolffe, Beznak, Henderson Roepke, and myself got it from glands and vessels. Others found traces in intestine, mammalian heart, and blood vessels. Hardly a lair is left now unexplored. Vagusstoff, chordostoff, oculo-motor-stoff, parasympathetic hormone, or what you will, is a reality. Furthermore, is indeed the junction between nerve end and cell. Atropine no longer acts on a hypothetical myoneural junction; its function is to prevent parahormone from acting on the cell. Indeed, after atropine, parahormone is still formed as Loewi, Szelozey and I have established.

The picture is clearer.

A nerve impulse, as yet unknown, does something unknown, but involving a supply of blood, and so liberates a substance probably acetyl-choline, or something extremely like it. The acetyl-choline now acts on the cell and produces the effect previously thought to be due to nerve stimulus itself.

What is true of the parasympathetic, is true of the sympathetic. Cannon was right, and has been strongly supported on direct evidence.

Do we stop there?

Is Sherrington right for the cord?

Are Pawlow's, cortical changes, so-called irradiations, spreads of liberated chemicals?

Are sensory impulses due also to peripherally liberated bodies possibly histamine?

And is the myoneural junction of voluntary muscle a liquid, a solution of some active drug, and not as Langley supposed a histologic structure?

Does then the chemical domination even hold on the nerve impulse itself?

These are clearly questions to be answered as soon as possible, for could we but get our hands on these control levers, as we now have on those in the autonomic system, we cannot help but see the immense and incalculable benefits which would be derived by medicine and the poor humanity she serves.

I trust then my little story which started long ago in the past, in the depths of some physiologic jungle by isolated explorers, will have served to illustrate how close seemingly idle scientific work may suddenly come to those problems pressing daily on every general practitioner, namely, the control of the human mechanism.

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#### NEW MEMBERS FOR 1934

(Continued from Page 97)

Crumbley, J. J., Sylvester.  
 Deibert, A. V., Atlanta.  
 Dismuke, H. L., Atlanta.  
 Edwards, E. C., Atlanta.  
 Freedman, L. M., Savannah.  
 Garver, Carl C., Atlanta.  
 Kallus, Edward J., Fort McPherson.  
 Kemper, H. D., Jonesboro.  
 Kracke, Roy R., Emory University.  
 Macklin, Walter F., Fort McPherson.  
 Meehan, John M., Fort McPherson.  
 Morrison, H. J., Savannah.  
 Oliphant, Jones B., Mitchell.  
 Ossefort, Wm. F., Atlanta.  
 Parker, Francis P., Emory University.  
 Peek, C. W., Cedartown.  
 Pinholster, J. H., Savannah.  
 Rabhan, L. J., Savannah.  
 Siegel, Alvin M., Macon.  
 Smith, J. M., Cochran.  
 Tasker, Arthur N., Fort McPherson.  
 Thomas, Frank H., Valdosta.  
 Thomason, Chas. G., Atlanta.  
 Walker, Jno. E., Columbus.  
 Wall, H. A., Ochlocknee.  
 Wheelchel, A. J., Cordele.  
 Williams, A. W., Columbus.  
 Williams, H. J., Cordele.  
 Williams, L. E., Cordele.  
 Williams, P. L., Cordele.  
 Williams, W. P., Blackshear.  
 Wilson, J. A., Fort McPherson.  
 Wooten, L. O., Cordele.

**THE JOURNAL**

OF THE

**MEDICAL ASSOCIATION OF GEORGIA**

Devoted to Welfare of Medical Association of Georgia

139 Forrest Avenue, N.E., Atlanta, Ga.

MARCH, 1934

**THE DENTAL PROFESSION AND THE  
COST OF MEDICAL CARE**

There has been much concern expressed by members of the dental profession over remarks in the final report of the Committee on the Cost of Medical Care with reference to the relationship of dentistry to medicine, and over remarks on the same subject made by the Committee on Medical Education. The fundamental disturbing thought seems to lie in an implied suggestion that dentistry should be made a division or special field of medicine. It is not probable that either of these committees had such an extensive change in mind. However, this has been suggested by members of the dental profession itself.

A deliberate and calm analysis of the present status of dentistry and medicine should allay any fear of an immediate outstanding change in their relationship. Although both professions are concerned with the preservation and restoration of health or the prevention and cure of disease, they have through past generations arrived at what can be termed, at least, a fairly satisfactory division of responsibility. The work of the dentist, in practice, does not encroach upon that of the physician nor is the reverse true.

The dental curriculum is organized to prepare the dentist for certain special fields of activity, largely the prevention and cure of dental caries. The medical profession is educated in general or special phases of health and disease. There are instances, of course, in individual cases where the cooperation of the medical and dental professions is necessary. This does not imply that all members of either profession should be trained to meet this need for mutual effort. As in every field of activity there are some who will prepare themselves for special limited problems. It would seem logical and natural, therefore, that from the side of the dental profession

should arise a group who are prepared to furnish the cooperation necessary at times. This necessity for cooperation is at present limited to an essentially small percentage of the patients for whom the services of the dentist are required.

The problem of the coordination of the two professions is so large that a satisfactory solution will probably be reached more happily and more comfortably by means of the natural, thoughtful, evolutionary progress of the two professions than by any attempted sudden, revolutionary plan. The probability of the placement of dentistry as a specialty in the field of medicine thus seems to be but remotely possible and only the experience of the intervening years will determine its real desirability.

RUSSELL H. OPPENHEIMER, M.D.  
Emory University.

**THE AMOUNT OF IODINE  
NECESSARY FOR HEALTH**

Certain substances are known to exist in foods, and occasionally in water, which, even in minute quantities, have a profound influence on the growth, metabolism and health of a person. One of the most important of these elements is iodine. As far as has been determined, the function of the thyroid gland is to synthesize inorganic iodine into a complex, specific compound known as thyroxin. According to Bircher, a Swiss surgeon and investigator, the normal iodine content of the thyroid is from 1-100 to 1-30 of a grain. It has been estimated that the thyroid gland secretes about 1-100 of a grain of thyroxin per day, or about 3 1-2 grains per year. The active secretion contains about 65 per cent of iodine, and for the thyroid to function normally it is necessary for approximately 1-150 of a grain of iodine to be extracted from the blood stream daily to be converted into thyroxin. After the thyroxin has been injected into the blood stream and has served its purpose, the iodine content is probably re-absorbed, being utilized over and over. While it has not been definitely proved that the same iodine is utilized more than once in the formation of thyroxin, we do know that it is necessary



for a person to receive in his food a small amount, else he will decline in health physically and mentally, and will finally die.

The amount of iodine necessary for health can be estimated in several ways. Probably the best way is to study the iodine content of the foods that have been used by a race of people who for generations have shown none of the diseases indicative of an iodine deficiency, and then to calculate the intake per day. Such people live along the seacoast, or in the lowlands where the iodine content of the soil and water is relatively large; in other words, on lands where the iodine has not been leached from the soil by the rains which have fallen through the ages, as it has been in large areas of the United States, Switzerland, northern Italy and other parts of the world. In the far northwestern states, in certain areas about the Great Lakes and a few other localities, the iodine content of foods grown in the local soils and in the water is exceedingly small. By calculating the iodine intake of a people who live near the seacoast, and who eat a certain amount of seafood, it is found probable that each person requires an intake of from 1-500 to 1-200 of a grain per day. A person living in sections poor in iodine, who does not eat seafood or does not take iodine as a medicine, probably gets only about 1-5000 of a grain per day. Some persons are so constituted that it is possible for them to have fair health on such a small amount. But the majority cannot, especially women who, on account of gestation and lactation, require a slightly larger quantity than men for the thyroid to function normally.

People differ as to the amount of iodine they require, both individually and racially. For example, the Indians, who for generations have lived in the interior of the United States, have become adjusted to a low iodine intake. It seems that the negroes of northern Africa, as well as those in this country, require less iodine than do the white people. Our ancestors came mostly from Europe. They lived along the seacoast where fish was one of the principal items of food; or else they lived in the lowlands where food and water were rich in iodine. Because of this,

we as a race have not yet become adjusted to a low iodine intake. We still need, as our ancestors did, at least 1-500 of a grain per day. If we get less than this amount, the cells in the thyroid go hungry for iodine.

In communities where iodine is deficient in the water and foods, it should be supplied artificially, in the correct amount, either in the water or in table salts, continuously throughout life. In Michigan it is now compulsory to use iodized salt, which contains 32-10000 per cent of iodine. In Rochester, N. Y., it is supplied in the water. Iodized salt is also being used in many parts of Switzerland. Sea Algae contain a large amount of organic iodine which may be administered in tablet form. There is a saying, "When in doubt give mixed treatment," that is, iodides and mercury. The remarkable fact is, that whenever this mixture is given to a patient, regardless of whether he has syphilis or not, he usually improves, especially if the iodides are administered in small doses.

JAMES N. BRAWNER, M.D.

Atlanta.

## CANCER OF THE UPPER DIGESTIVE TRACT

The great life insurance companies have announced that the death rate from cancer among their policy holders for 1932 increased more than 3 per cent. All must acknowledge the value of statistics compiled by these highly efficient organizations. And to those who have tended to minimize the incidence of cancer this statement must come as a surprise! An air of complacency must not be allowed to creep in and give a false sense of security. It is our duty to face the situation in its proper light and continue our campaign against this cause of death which stands second from the top in mortality statistics.

It is generally conceded to be the duty of the medical profession to educate the laity regarding cancer. We accept that responsibility. There are some of us, however, who fail to realize that prodding of the profession is sometimes in order. That seems especially true when advice by laymen is sought regarding certain signs and symptoms which should be recognized as danger signals of

malignancy, but which are taken as a matter of course and treated casually.

In speaking of gastric cancer Lord Moynihan said, "The surgeon who walks by sight and not by faith knows that gastric ulcer is a real thing." When considering a gastric lesion, it should be kept in mind that the size of an ulcer is suggestive of the presence or absence of malignancy. Alvarez has stated that if the lesion is the size of a dime, there is one chance in fifteen that it is malignant; the size of a quarter, one chance in ten; the size of a half dollar, two chances to one that it is malignant; a dollar, almost certainly malignant. From 15 to 25 per cent of cases of cancer of the stomach are symptomatically that of ulcer. About 60 to 75 per cent of patients with gastric cancer have an abrupt onset of symptoms. They are usually persons without gastric symptoms, who have previously enjoyed good health.

Cancer shows about the same preponderance in the male that peptic ulcer does, three to one, and from 1.5 to 4 per cent of all necropsies show gastric cancer. Diagnosis can be made by means of the roentgen ray in 90 per cent of the cases, when in the hands of a competent operator, and should be used with greater frequency than at present.

The treatment of cancer of the stomach is primarily one of prevention, for it is a well known fact that the percentage of cures, even in operable cases, is far too small. Careful attention to any and all gastric disturbances occurring in the third and fourth decades, with excision of ulcers, will lessen the incidence of cancer, and this method seems, at present, to be our greatest hope for a reduced death rate from this malady.

After cancer has been definitely diagnosed, the treatment depends upon the location of the tumor and the symptoms which it produces. Usually there is the choice of partial gastrectomy in early cases or gastro-enterostomy in late cases. But the percentage of operable cases is lamentably small and the operative mortality is discouragingly large. We do not know what part deep therapy may have in the future, but at present surgery seems the best and, practically, the only method of relief.

Cancer of the gallbladder is found more often in women than in men, for the reason that chronic irritation by gallstones is a determining factor in about 8.5 per cent of cases of primary cancer of the gallbladder, and we all know that women have more than their full quota of gallstones. Symptoms of cancer of the gallbladder are simply the extension of those of cholecystitis, with ultimate tumor formation and deepening jaundice as the disease encroaches on the common duct. Treatment is largely that of prevention. Since 6 per cent of all malignancies are of the gallbladder and since stones are a great factor in their production, the rational course is one of prevention by removing diseased gallbladders when the diagnosis is made.

There is no tumor of the digestive system which is diagnosed with such ease and certainty as cancer of the head of the pancreas. One will rarely fail to arrive at a correct diagnosis if he remembers that it is afebrile, accompanied by cachexia, deepening jaundice, with or without pain, and presenting a tumor in the epigastrium. Treatment should be directed toward clearing up infections of the biliary tract and removing the gallbladder when it is diseased, and finally, when a cancer of the head of the pancreas is found, the palliative measures of cholecysenterostomy or cholecystostomy may be invoked and thus prolong life for a while. There are few more hopeless conditions encountered by the surgeon, but let us continue the fight, for the necessity is great.

Our efforts to prevent cancer should be increased, for prevention seems to be the only hope of improvement in this field, and we as leaders must measure up to our full responsibility in educating ourselves and the public in ways of prevention.

WILLIAM H. MYERS, M.D.  
Savannah.

*The JOURNAL would like to record the scientific work of Georgia doctors. It earnestly requests, therefore, that each physician in the State who publishes a contribution in some other medical periodical submit an abstract of the article for these columns.*



## THE ATLANTA CANCER CLINIC GEORGIA BAPTIST HOSPITAL ATLANTA

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The Hospital Commission of the Georgia Baptist Hospital, at a meeting Friday, February 23, 1934, authorized the establishment of "The Atlanta Cancer Clinic," for pay patients.

The Clinic will have its quarters in the Medical Building of the Hospital, as soon as the necessary changes can be effected.

A weekly conference of the clinic staff will be held for diagnosis and outline of treatment. All legally qualified physicians are invited to attend and participate in these conferences.

A diagnostic fee, commensurate with circumstances, will be charged. These fees will be used for maintenance of the Clinic. Following the conference a written report, giving the diagnosis and recommendations for treatment, will be sent to the patient's physician. Treatment may be obtained at the Georgia Baptist Hospital, or elsewhere, at the discretion of the patient's physician.

Dr. James L. Campbell, who has devoted many years to the study of cancer, has been elected by the Hospital Commission as Director of The Atlanta Cancer Clinic. The clinic staff will be separate from the regular hospital staff. The officers elected for the ensuing year are: Dr. T. C. Davison, president; Dr. J. J. Clark, first vice-president; Dr. M. T. Benson, second vice-president, and Dr. Howard Hailey, secretary.

The Clinic will have 370 milligrams of radium element available, which is more than the minimum requirement of the American College of Surgeons. Dr. O. D. Hall, who has been experienced in the use of radium for a number of years, will be available for consultation.

The latest type deep x-ray therapy machine has been installed within the last year and is operated by Dr. W. F. Lake, who is one of the outstanding roentgenologists in this section.

Surgery remains the foremost weapon against cancer, and many of the outstand-

ing surgeons of Atlanta are on the clinic staff.

Every applicant for admission to the Clinic must be accompanied by, or bring a letter from, his or her physician. In case they haven't a physician, a signed statement to that effect will be required.

The formal organization of The Atlanta Cancer Clinic brings recognition to the large amount of cancer work which has been done at the Georgia Baptist Hospital in recent years. This organization will meet the requirements of the American Medical Association, the American College of Surgeons and the Fulton County Medical Society.

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## SOUTHEASTERN SURGICAL CONGRESS

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### NASHVILLE MEETING

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Dr. Willis C. Campbell, Memphis, President of the Southeastern Surgical Congress, 1933-34, wrote an article which was printed in the program in reference to the Congress and Memphis as follows:

"The Southeastern Surgical Congress will meet for the first time in the State of Tennessee, when the Congress will be held in Nashville, March 5, 6, and 7. This organization, although existing for only a few short years during the depression, has proven of inestimable value to the surgeons of the eight Southeastern States, Mississippi, Alabama, Florida, Georgia, South Carolina, North Carolina, Louisiana and Tennessee, and through the publication of its transactions in *The Southern Surgeon* the high type of scientific work has become generally recognized by the profession of the nation.

"Membership in the Congress gives ample opportunity for individual expression of many well trained scientific surgeons, who might otherwise not be afforded opportunity to publish the results of their endeavors. Only well trained, ethical and scientific surgeons who have manifested sufficient interest in the problems of surgery are admitted as active members, although any member of the medical profession may attend the deliberations of the Congress, as the main object of the association is to advance and develop knowledge in the various fields of surgery, especially in the southeast. A large majority of the eligible surgeons of the southeastern section are members; and when the object and accomplishments of the association are known to them it will obviously become the duty and privilege of every eligible surgeon to take an active part.

"The Congress has previously been held in only two states, Georgia and Alabama, and the meeting in Nashville, Tennessee, marks a new epoch in the geo-

graphic development, which will afford a most unusual opportunity for all surgeons in Tennessee and vicinity to hear a program, and attend clinics by surgeons of national and international repute. Each year there has been a material improvement in the program, and this year will be no exception. The committee has been fortunate in obtaining so many renowned and celebrated speakers that the meeting will require three days, as compared with only two days in the past.

"Nashville is a great medical center and many graduates of the Medical College of that city will avail themselves of the opportunity to again mingle with their former classmates and professors, also, the medical profession in this "Athens of the South" is noted for its hospitality which will be extended in full measure on this occasion. On account of the location and many other advantages above mentioned the next Congress promises to be one of the greatest ever held in any section of the country."

Georgia doctors and titles of their papers on the program were as follows:

Dr. T. C. Davison, Atlanta, *Thyroid Surgery in the Cardiac*.

Dr. Stewart R. Roberts, Atlanta, *The Heart in Relation to Surgery*.

Dr. Frank K. Boland, Atlanta, *Abdominal Disease as the Cause of Abdominal Symptoms*.

#### RADIO WAVES

##### *Seventh Edition*

"If you work in a profession, work for it. If you live by a profession, you should live for it."—*Richardson*.

"Frequently it is just as essential to know the patient as it is to know the disease."—*Ayers*.

"The medical profession can assist greatly in the public health program by prompt reporting of communicable diseases."—*Applewhite*.

"Young man, keep your office and it will keep you."—*Turner*.

"1934 can be made our banner year. Let's do it."—*Bunce*.

"Blessed is the community in which the family doctors grow old kindly and sweetly."—*Simmons*.

"The greatest service any citizen can render his country is to put his own house in the best possible order, doctors included."—*Thompson*.

"Health and happiness can be found only out of doors.' This applies to doctors also."—*Redfearn*.

"Enthusiasm for one's work is the driving force which makes for success."—*Patterson*.

"Medical organization is paramount if the profession is to retain its high place in the respect of the public."—*McCord*.

"Let's strive to keep ahead of the layman and in so doing prevent state medicine."—*Penland*.

"Report your rare cases and don't mind being proved wrong because he who enters the practice of medicine with the idea that only successfully treated

cases should be reported has evidently chosen the wrong profession."—*Coker*.

"It has been said, 'Life is a sheet of paper, white, Whereupon each man of us may write His word or two, and then comes night.'"—*Lewis*.

"Did you have YOUR periodic health examination last year, doctor?"—*Bancker*.

"It is about time to let the people of Georgia know that they don't have to go north, east or west to secure the best treatment for what ails them."—*Blackford*.

"Every physician needs a vacation once a year. Spend part of it attending the annual session of the Medical Association of Georgia."—*Dougherty*.

"Improved service to the patient should be the primary consideration of organized medicine."—*Massee*.

#### COUNTIES REPORTING FOR 1934

##### *Tattnall County Medical Society*

The Tattnall County Medical Society announces the following officers for 1934:

President—J. C. Collins, Collins.

Vice-President—C. B. Walling, Collins.

Secretary-Treasurer—J. M. Hughes, Glennville.

##### *Elbert County Medical Society*

The Elbert County Medical Society announces the following officers for 1934:

President—D. N. Thompson, Elberton.

Vice-President—F. A. Smith, Elberton.

Secretary-Treasurer—A. S. Johnson, Elberton.

Delegate—D. V. Bailey, Elberton.

Alternate Delegate—W. A. Johnson, Elberton.

Censors—F. A. Smith, A. C. Smith and D. N. Thompson.

##### *Ocmulgee Medical Society*

(Bleckley, Dodge and Pulaski Counties)

The Ocmulgee Medical Society announces the following officers for 1934:

President—W. H. Pirkle, Cochran.

Vice-President—J. C. Wall, Eastman.

Secretary-Treasurer—I. J. Parkerson, Eastman.

Delegate—I. J. Parkerson, Eastman.

Alternate Delegate—W. A. Coleman, Eastman.

##### *Polk County Medical Society*

The Polk County Medical Society announces the following officers for 1934:

President—Geo. M. White, Rockmart.

Vice-President—P. O. Chaudron, Cedartown.

Secretary-Treasurer—H. R. Perkins, Rockmart.

Delegate—P. O. Chaudron, Cedartown.

Alternate Delegate—Geo. M. White, Rockmart.

Censors—S. L. Whitely and J. W. Good.

##### *Crisp County Medical Society*

The Crisp County Medical Society announces the following officers for 1934:

President—P. L. Williams, Cordele.

Vice-President—C. E. McArthur, Cordele.

Secretary-Treasurer—J. N. Dorminy, Cordele.

Delegate—L. O. Wooten, Cordele.

Alternate Delegate—M. R. Smith, Cordele.



## GEORGIA DEPARTMENT OF PUBLIC HEALTH

T. F. ABERCROMBIE, M.D., *Director*

### DIVISION OF COUNTY HEALTH WORK

The Division of County Health Work was established by the State Board of Health on January 1, 1919, for the purpose of giving aid to the full-time county health units then existing and for stimulating interest in the organization of new units. Prior to that time, three counties had organized units, the first being Glynn County, established in 1914. Even before any county health units were organized in the state, studies and demonstrations had been conducted by the State Board of Health cooperating with the Rockefeller Sanitary Commission for a short period of time in a number of counties. These studies were begun in 1909 and were conducted mostly for the purpose of making further studies in hookworm disease control.

During the past eighteen years the wide development of county health units throughout the South has awakened the public to the value of county health work, and the rapid progress that has been made in the prevention of disease and the extension of life has resulted in the establishment of thirty-three full-time county health units that give health protection to 46 per cent of the population of Georgia.

Georgia is the largest state east of the Mississippi and has one hundred fifty-nine counties. Only thirty-nine of these counties have a population of more than 20,000, however, and for this reason it is difficult to secure an adequate appropriation to establish a health unit in the majority of counties. The state is also divided topographically into three distinct sections, the mountainous section with peaks that rise 5,000 feet above sea level, the middle or Piedmont section, and the Coastal Plain region. Each of these three sections presents an uneven distribution of illness and each section has health problems entirely different from the other. Therefore, the economic and logical method in the control of communicable disease and the protection of health is through a full-time county health unit, carrying out activities and developing a program in the county where the disease originates.

The past two years have brought more problems and financial difficulties to the county health units than any period in the history of public health work in Georgia, but only one county has discontinued health work during the two-year period of 1931-1932. All of the counties received a reduc-

tion in their budgets during the two years but were able to retain their entire personnel by reducing salaries.

### *Health Districts*

In June 1924, Decatur, Seminole and Miller counties were organized into a health district. The personnel of this district consisted of a medical officer, three sanitary inspectors, and a clerk. These counties are located in southwest Georgia, where malaria is the major problem. A satisfactory sanitation and drainage program were established, and the district operated for one year. After that time the two smaller counties, Miller and Seminole, were unable to continue their appropriations, and in 1925, a new district was established composed of Decatur, Grady and Baker counties. In 1927, Grady County decided to establish a county health unit alone. This left only two counties in the district, and since Baker was unable to finance its share of the budget, the health district was discontinued and Decatur County reestablished its county health unit alone.

On April 1, 1931, two new health districts were established in northwest Georgia through the cooperation of the United States Public Health Service and drought relief funds. District Number One was composed of Chattooga, Walker and Dade counties. This district had a personnel of a health officer, sanitary engineer, three nurses and a clerk. District Number Two was composed of Catoosa, Gordon, Murray and Whitfield counties. The personnel of this unit consisted of a health officer, sanitary engineer, four nurses and a clerk. These two districts operated until June 30, 1932, at which time the drought relief funds were withdrawn, and a new health district organized which was composed of Walker, Dade and Catoosa counties. This district has a personnel of a health officer, sanitary engineer, two nurses and a clerk. The counties share a larger part of the budget, with the state and the United States Public Health Service cooperating. The other four counties in the original districts were unable to finance their share of the budget to operate a health district, but Whitfield and Murray counties have continued the services of their public health nurses.

The demonstration in these health districts has proven that a well-rounded health program can be carried out in forming health districts, and the future progress of county health work in Georgia depends to a great

extent on the forming of similar health districts.

### *Mobile Health Unit*

Through the cooperation of the United States Public Health Service, a Mobile Health Unit was established on April 1, 1931, under drought relief funds. The personnel of this unit consisted of a medical officer, nurse and sanitary engineer. After operating for two months, it was decided to replace the engineer with two nurses, as it was found that the unit spent such a short time in each county that a sanitary program could not be established before the unit moved into another county. The work of this unit was carried on in the small counties in which there was no organized form of health work and the cooperation given in every county showed that they were anxious for health work to be established. The Mobile Health Unit was discontinued on June 30, 1932, on account of the discontinuance of the funds.

### *Trachoma Unit*

In September, 1930, a large number of cases of trachoma was found in southwest Georgia. Trachoma had been known to exist in this section for a number of years. The United States Public Health Service was requested to assist in making a survey of two counties, Mitchell and Decatur, in January, 1931, and during this survey several hundred positive cases of trachoma were found.

On February 1, 1931, the State Department of Public Health, with the cooperation of the United States Public Health Service established a trachoma field unit, the personnel consisting of a part-time physician and two public health nurses. This field unit operated until September 1, 1932, at which time the State Department of Public Health received a special appropriation for trachoma work from the state legislature. The field unit was then reorganized and a full-time physician and one public health nurse employed as personnel for the unit.

This unit was discontinued on June 30, 1933, on account of the discontinuance of the funds.

### *Mouth Hygiene*

The Department of Mouth Hygiene began operation under this Division on January 1, 1931. The personnel of this department consists of a Supervisor of Mouth Hygiene, whose work is entirely educational, consisting of lectures and suggested programs for the promotion of mouth health.

Special emphasis is given in talks to teachers and to county school superintendents. The teachers of a county are requested to meet at some centrally located place in the county and have a lecture on mouth hygiene given

and an outline on the procedure for establishing a dental program in the schools. Blanks are furnished to each school for recording the examination of each child's mouth. The dentists in the county are visited, an outline of the school program furnished them and their cooperation requested in the dental program. All examinations are made by the local dentists and much success of this dental health program is due to the splendid cooperation given by the Georgia Dental Association. More than 200,000 school children were examined free during the past two years by the dentists of the state and thousands of dental defects were corrected at small or no cost to the school children.

### *Activities and Accomplishments of County Health Work*

The accomplishment of the work done in Georgia during the past eighteen years in counties with full-time county health units cannot be enumerated in one short article. The activities of every county health unit have been directed toward the control of all preventable diseases.

Since the establishment of our Department of Vital Statistics in 1919, many interesting facts have been told in the death records filed by the physicians of Georgia. These records show that the annual average death rate for 1927 to 1931 in the counties operating full-time health units is far less than in those counties without organized health work. During these five years, the annual average death rate from typhoid fever in counties with full-time health units was 14 per 100,000 population, while in the counties without organized health work the rate was 20 per 100,000 population.

The death rate from diphtheria during the same period in the counties with full-time county health units was 6 per 100,000 population, while in counties without organized health work, the death rate was 7.5. From malaria fever during the same five-year period the annual average death rate in those counties with full-time health units was 22 per 100,000 population and in counties without organized health work the malaria death rate was 33 per 100,000 population.

A study of the average age at death during 1931 shows that in counties with full-time health units, the average age at death was 43 1-2 years, while in counties without organized health work the average age at death was 41 years.

There was a time when life in the towns and cities of our state was exposed to greater hazards than were encountered in the rural sections. This was due to the greater density of population, with its greater difficulties:



of sanitary control and the easier exposure to the communicable diseases. The modern improved health facilities afforded to the resident of the city, however, have changed conditions. Now we find that the greatest hazards to life and health are to be found among our rural population.

When we consider that practically seventy per cent of the population of our state live in rural areas and some of them under conditions which in many instances do not afford anything like adequate health protection, we can readily appreciate why the relative conditions of the dwellers in the cities and county sections have changed. It also shows the crying need of this great mass of our citizenry for some form of organized effort to protect them from those conditions, which are not only endangering their lives and health, but also their efficiency.

While the sources of material wealth are carefully guarded, human resources are often carelessly used and wastefully squandered. It is a time-honored adage that health is not appreciated until it is lost. Just how much health is worth can now be estimated in dollars and cents. The average Georgian loses seven days a year through sickness. Losses from sickness and preventable deaths are enormous. Millions of dollars could be saved annually by applying what is known about modern preventive medicine and public health. The basis of the value of human life must naturally be health. Without health, earnings usually drop. It is when the bread winner of a family is removed through accident or disease and the mother and young children must become self-supporting, that, first, the dependents and later the community realize the cost of a death from a preventable disease or accident.

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#### FOURTH DISTRICT MEDICAL SOCIETY MEETING

The Society met at LaGrange on February 7th. The scientific program consisted of:

*Tuberculosis and Its Surgical Treatment*, by Dr. R. L. Carter, Thomaston. Discussed by Dr. Enoch Callaway and Dr. S. C. Rutland, both of LaGrange.

*The Duty of the Obstetrician to the Infant During the First Year of Life*, by Dr. W. P. Phillips, LaGrange. Discussed by Dr. R. L. Carter, Thomaston, and Dr. A. A. Barge, Newnan.

*Tempering the Wind to the Shorn Lamb*, by Dr. Enoch Callaway, LaGrange. Discussed by Dr. M. M. Byrd, West Point; Dr. Wm. C. Miles, Griffin, and Dr. A. H. Frye, Griffin.

Dr. Allen H. Bunce, Atlanta, Secretary-Treasurer of the Association, gave valuable information in his

address on the Federal Emergency Relief Administration and the Civil Works Administration.

Dr. W. A. Selman, Atlanta, Councilor of the Fifth District, spoke on organized medicine, Woman's Auxiliary, and work of the Journal of the Medical Association of Georgia.

*Cancer of the Terminal Bowel*, by Dr. Marion C. Pruitt, Atlanta.

*Infantile Paralysis—Case Report*, by Dr. A. A. Barge, Newnan.

Officers elected were: Dr. A. H. Frye, Griffin, President; Dr. R. S. O'Neal, LaGrange, Vice-President; Dr. M. M. Head, Zebulon, Secretary-Treasurer.

The Society will meet at Warm Springs on Wednesday, August 1st.

Respectfully,

M. M. HEAD, M.D.

Zebulon.

Secretary-Treasurer.

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#### AMEBIASIS: INCIDENCE IN PRIVATE PRACTICE

H. S. Sumerlin, San Diego, Calif. (*Journal A. M. A.*, Feb. 3, 1934), presents a survey that shows the incidence of intestinal protozoa in individuals of a higher social status than that of indigent persons. It is a summary of the results of routine examinations of the stools of 1,852 patients during the past four years. The results of the examinations in the cases of 1,339 adults and 513 children are listed separately to show the low incidence of protozoa as compared to adults. *Endamoeba histolytica* was found in thirty-one adults, or 2.3 per cent, and in two children, or 0.4 per cent. Combining these results gives an incidence of 1.7 per cent. In three of the author's adult cases the infestation undoubtedly occurred outside the United States. In this series only one case of frank amebic dysentery was encountered and that was in a 5 year old child. In only four cases were cysts absent from the stools. A comparison of the results of this survey with others made elsewhere indicates that the incidence of *Endamoeba histolytica* varies from 0.2 to 15.58 per cent in the different studies. There is no doubt that the incidence varies with the class of patients and the geographic location. One cannot but wonder why, in view of the large number of people harboring this parasite, so few cases of frank amebic dysentery are seen and why there are not more local epidemics like the recent outbreak in Chicago. It has been stated repeatedly that a single fecal examination will reveal only about half the protozoa that can be detected by multiple examinations. This has not been the author's experience. In thirty-one cases of infection with *Endamoeba histolytica*, the parasite was found in the first specimen in thirty-one cases, in the second in one case and not until the third examination in one case. The fact that the first specimen was collected following a saline cathartic probably explains these results. He found, however, that in some subsequent examinations revealed other species of protozoa not found on the first examination.

## WOMAN'S AUXILIARY OFFICERS

President—Mrs. J. Bonar White, Atlanta.  
 President-Elect—Mrs. J. E. Penland, Waycross.  
 First Vice-President—Mrs. J. J. Pilcher, Wrens.  
 Second Vice-President—Mrs. R. C. Pendergrass, Americus.  
 Third Vice-President—Mrs. G. Hugo Johnson, Savannah.

Recording Secretary—Mrs. Warren A. Coleman, Eastman.  
 Corresponding Secretary—Mrs. E. A. Allen, Atlanta.  
 Treasurer—Mrs. Chas. Usher, Savannah.  
 Historian—Mrs. E. R. Harris, Winder.  
 Parliamentarian—Mrs. J. M. Barnett, Albany.  
 Editor—Mrs. W. A. Selman, Atlanta.

### THE WOMAN'S AUXILIARY NOT A CORNERSTONE BUT A SUPPORT

The word "auxiliary" is defined as an aid or support in a secondary manner. We, the Woman's Auxiliary, are the reserve force of the Medical Association of Georgia. We may not be needed at all times but we must be prepared and stand ready for an instant call to action.

Years ago the women realized that the original plan of the organization, to develop a social unity among the doctors and their wives, was insufficient to hold their interest. They desired activities that would prove of lasting benefit to the profession and through them, to the public. From this unrest developed the philanthropic, the legislative, the educational, and the public relations functions. We all know of the varied types of educational work the Auxiliary does all over the United States but do we know what type of legislative work we are supposed to do? Do we know just how to prepare ourselves in order to attend to the work of the public relations function? This is conceded to be our most important work. It is our duty to be informed on such medical legislation as the Association advises, then we are fitted to inform our part of the public and to mould public sentiment in favor of the laws which the profession steers.

A few years ago a doctor's wife did not have the opportunity of service that we have now. Her only contact with her husband's profession was through accepting his calls, being able to report on "whereabouts," and in keeping his meals hot, and him physically fit to attend to the ills of the community. I would not minimize this important task, every wife realizes the value of a well-organized and happy home, but she can not devote her entire interest to her family's well being and be the kind of wife and mother that she should be. She owes it to her husband and her children to make contacts outside of the home, by keeping abreast of the times, by being well-informed. Then she is more capable of keeping alive interest in her home.

We are wholly dependent on the Medical Association of Georgia, directed by its members, and our activities speeded or checked by them according to their interest. There are very few instances where the Association is not keenly alive to the importance of the work that the Auxiliary is doing. When there is an obstacle or an objection we can overcome it by sowing the seed and allowing the public to reap the benefits of our labor.

We can do notable work in informing the outsiders with whom we come in contact of the legislation that our husbands want before the public. So we should not only accept but seek leadership and chairmanships in the clubs of which we are members. People expect us to assume leadership in health work, they naturally look to us for information and we owe it to them to be able to supply this information.

The Medical Association of Georgia will, as a rule, instruct us in the work they wish to have done; but when they fail to do so we should go to them for the information. A few weeks ago the doctors in a certain county were endeavoring to put over a project that would have been a benefit to the people of the community but for some reason the public chose to express themselves adversely by resolutions and publicity. For weeks the Auxiliary was not instructed to take part in the discussion, but when they were they exerted influence in the right direction. We are anxious to have the medical societies understand that we are their reserve to counteract such opinions and actions as this. If they would stress the organization of Auxiliaries and instruct us in matters that are of public concern and knowledge, they would be more influential.

Waycross. NELL BATES PENLAND

#### RICHMOND COUNTY AUXILIARY

The party given by the Woman's Auxiliary to the Richmond County Medical Society for the benefit of the Student Loan Fund was well attended and every one there had an enjoyable afternoon of bridge.

The general chairman of the party was Mrs. L. P. Holmes, assisted by Mrs. J. H. Butler, Mrs. R. L.



Rhodes, Mrs. W. W. Battey. Chairman of guests and tables were Mrs. Lombard Kelley and Mrs. Peter Wright.

There were thirty tables with many beautiful prizes.

#### AUGUSTA KIWANIS HONOR MRS. BATTEY

Mrs. W. W. Battey, Sr., beloved Augusta civic leader, was honored by the Kiwanis Club of Augusta in the first of a series of luncheon meetings intended to pay tribute to Augustans who had "contributed to the betterment of the city and its people."

Mrs. Battey was presented to the Club by L. S. Moody, who recorded some of Mrs. Battey's countless services. He recalled that in 1922 she was awarded the Augusta Herald cup for outstanding and effective labors for the community. She organized the first Catholic Woman's Club; was Chairman of the Volunteer Service Commission; first President of the Child Welfare Board; first President of Milk and Ice campaign for the needy; leader in Richmond County Auxiliary; in Red Cross Roll Calls; in the movement to eradicate tuberculosis; in Daughters of the Confederacy; Jefferson Davis Highway Association (State Chairman); and in work for the assistance of the colored people and other activities; and crowned by organization of Woman's Service League.

We rejoice that Augusta so honored Mrs. Battey and that we may send this knowledge to our Auxiliary members.

#### CHATHAM COUNTY AUXILIARY

On January 24th, the Chatham County Auxiliary gave a delightful tea at the home of its President, Mrs. W. Hays Johnson in Savannah, in honor of Mrs. J. Bonar White, President of the State Auxiliary and other members of the Flying squadron of the Georgia Congress of Parents and Teachers who were in the city conducting a school of instructions. These guests were Mrs. Charles Center and Mrs. K. Weathersbee, of College Park, and Mrs. Fred Seanling of Atlanta.

Mrs. Laurence Kelly, President of First District P.-T. A. and Mrs. J. H. Mendes of the Chatham County P.-T. A., assisted the Auxiliary in receiving.

Members of the Auxiliary, presidents and officers of P.-T. A., chairmen and members of standing committees were among guests invited.

Press notices of the Institute said, "One of the most outstanding talks of the morning was given by Mrs. J. Bonar White, of Atlanta, who spoke on health. She stressed the value of the health of mothers and the great need of prenatal and postnatal care—including examination for healing of scars of childbirth that could lead to cancer. She emphasized education in parenthood at least during courtship and if possible from the earliest years—by home environment and frankness in meeting problems of growth that beset children. She also advised membership in Junior Red Cross for fitness of service through health, etc., and the conducting of Little Mother's Helpers Leagues for which the State Board of Health gives certificates and buttons for satisfactory completion of course."

As Chairman of Department of Social Hygiene for Georgia League of Women Voters, Mrs. White spoke to the Savannah League before attending the Auxiliary tea. The Savannah Morning News of January 25th gave 66 lines in a resume of her speech, of which we quote the first 16. "Mrs. White charmed her audience by her unaffected manner and her gracious and clear-cut way of presenting her subject. She gave a very fine outline in brief compass of the attitude toward sex that has prevailed in different stages of society and in oriental and western countries when women were put on a pedestal and to periods when the double standard was accepted by all. With this she contrasted the development of the social ideal to a point where women demanded of men what men had always demanded of women and where the wife and mother are also the women beloved."

#### *The Flying Squadron and the P.-T. A.*

The Flying Squadron held a school of instruction next day at Clayton. Educational material of the Auxiliary was given to schools in three counties.

While in Savannah, the Squadron went to see the President of the Colored Georgia Congress of Parents and Teachers. Mrs. White gave material for 21 schools with a promise of more.

Dr. M. D. Collins, State Superintendent of Georgia Schools, is using 399 sets of our three-minute talks for rural schools without P.-T. organizations.

The Atlanta Chamber of Commerce, in using the health work of the local Auxiliary in its report to the National C. of C. The Fulton County Auxiliary has just given twelve one-year subscriptions to libraries in their county. Sumter County has supplied all its county libraries, but failed to state the exact number.

#### NEWS ITEMS

Some items from Mrs. Robert E. Fitzgerald's A. M. A. news letter: "The year 1934 will bring us to Cleveland, Ohio, June 11 to 14, for our annual meeting. The Carter Hotel has been selected as our headquarters. We find it is located just two short blocks from the Statler, the hotel headquarters for the men of the American Medical Association."

"Mississippi and Wisconsin have already gone over the top with an increase in the number of their delegates for 1934. How fine it would be if every state could add at least one over last year's representation."

"On Sunday, December 31st, the Twin Cities papers carried a page of New Year's greetings and thoughts from prominent women of the United States. It was a pleasure to find a picture of Mrs. James Blake, our National President, along with those of Miss Frances Perkins, Mrs. Grace Morrison Poole, of the General Federation, and others."

Georgia Auxiliary members may well be proud of the lengthy paragraph in the A. M. A. news letter telling of the activities of the Woman's Auxiliary of Georgia, and to our efficient President goes the credit for all of this activity.

## NEWS ITEMS

The Georgia Medical Society met on February 13th. Dr. E. C. Demmond, Savannah, read a paper entitled, *A Discussion of Hemorrhage During Pregnancy*; discussed by Dr. H. F. Sharpley, Savannah. Dr. Chas. Usher, Savannah, *Perforated Duodenal Ulcer—Case Report*.

Members of the Terrell County Medical Society taught classes in first aid for treatment of wounds, poison, sudden sickness, artificial respiration and other emergencies which might arise among workers of the Civil Works Administration. The enrollment included men from the counties of Brooks, Lee, Randolph and Terrell.

The Clarke County Medical Society met at the Georgian Hotel, Athens, on February 2nd. Dr. W. H. Cabaniss, Athens, read a paper entitled, *Inflammatory Conditions of the Eye*; Dr. W. H. Birdsong, Athens, *Reduction of Difficult Fractures*. Invitation was extended the doctors of Oconee county to join the Clarke County Medical Society.

The Macon County Medical Society met on February 1st. Plans were adopted to require cash payment for medical service from people who owed members of the society past due accounts and refused to make satisfactory arrangements.

The staff of the Ware County Hospital, Waycross, held its regular quarterly clinic on February 13th. The clinic program consisted of: *Hospital Records of Splenomyelogenous*, by Dr. J. E. Penland; *Spontaneous Pneumothorax and Uncinaria with Complications*, by Dr. C. M. Stephens, Waycross; *Sarcoma of the Choroid and Lymphosarcoma*, by Dr. W. D. Mixson and Dr. B. H. Minchew, Waycross; *The Electrocardiograph and Coronary Thrombosis*, by Dr. J. A. Redfearn, Albany; *Plastic Repair Foot Deformities, Treatment and Club Feet, Dactylomegaly, Cervicitis and Electric Coagulation*, by Dr. Kenneth McCullough, Waycross; *Fistulous Drainage Gastric Contents through Nephrectomy Incision, Cecal and Ascending Colon Fistula following Rupture of Abscessed Appendix, Injurious Effects Prolonged Immobilization of Arm and Forearm Fractures*, by Dr. R. L. Johnson, Waycross; *Transurethral Resection of Prostate Under Spinal Anesthesia*, by Dr. W. F. Reavis, Waycross.

Dr. Jas. K. Fancher, Atlanta, gave a lecture on *Some Safeguards in Courtship and Marriage* at the Rock Spring Presbyterian church, Sunday evening, February 10th.

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, on February 15th. Dr. B. Russell Burke gave a case report, *Pharyngomaxillary Fossa Abscess*; Dr. C. C. Aven gave a clinical talk on *Artificial Pneumothorax with Motion Picture Illustration of Technic*; Dr. W. A. Selman read

a paper entitled *Carcinoma of the Colon*. Discussions were led by Dr. Hal C. Miller, Dr. Jas. J. Clark and Dr. W. Beecher DuVall.

The Macon Medical Society met on February 20th. Dr. Roy R. Kracke, Emory University, read a paper entitled, *Agranulopenic State—Illustrated*.

Dr. Floyd W. McRae, Atlanta, has been appointed Major in the Medical Department of the Officers Reserve Corps.

The Atlanta Tuberculosis Association met on February 13th. Dr. Geo. F. Klugh, Atlanta, was elected President of the Medical Staff; Dr. C. C. Aven, Atlanta, Vice-President; Miss Mary Dickinson, Atlanta, Secretary. Doctors of Atlanta who have been elected to the Board of Directors are: C. C. Aven, R. H. Oppenheimer, Geo. F. Klugh. Doctors of Atlanta who will serve on the Medical Staff are: Arch Avary, C. C. Aven, E. A. Bancker, Jr., L. Minor Blackford, Allen H. Bunce, Ben H. Clifton, M. B. Copeloff, F. E. Christopher, A. M. Dimmock, J. F. Hanson, A. Worth Hobby, Champ H. Holmes, J. T. Hutchins, C. G. Kemper, Geo. F. Klugh, J. W. Landham, J. C. Massee, F. C. Nesbit, L. G. Parham, Marion C. Pruitt, Dan Y. Sage, E. Van Buren, Cosby Swanson, Geo. L. Walker, and T. I. Willingham.

The Crisp County Medical Society sponsored a Chest Clinic which was conducted at the county court-hours in Cordele by the Department of Public Health in co-operation with the members of the society, on February 15th.

Dr. Chas. H. Richardson, Macon, President of the Association, spoke at a meeting of the Macon Exchange Club, February 20th, on *Eugenic Sterilization of Mental Defectives*. The newspapers of the state have been very favorable in their editorial comments on former addresses made by Dr. Richardson in reference to the same subject.

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, March 1st. Dr. J. Gaston Gay, Atlanta, gave a case report, *Aberrant Thyroid—Lantern Slides*; Dr. J. W. Landham, Atlanta, made a clinical talk on, *Congenital Pyloric Stenosis—Illustrated*; Dr. Carter Smith and Dr. H. C. Sauls, Atlanta, read a paper, *Recovery from Coronary Thrombosis: Report of Eight Cases with Particular Reference to the Recognition of the Less Severe and Atypical Types*. The discussions were led by Dr. Jas. E. Paullin, Dr. Evert A. Bancker, Jr., and Dr. Abner W. Calhoun, all of Atlanta.

The Randolph County Medical Society met at the Patterson Hospital, Cuthbert, on March 1st. Dr. G. S. Murray, Columbus, spoke on, *The Treatment of Chronic Arthritis*.



The Georgia Medical Society met on February 27th. Dr. S. F. Rosen, Savannah, read a paper, *Amebic Dysentery*; discussion led by Dr. Lee Howard and Dr. J. C. Metts, Savannah. Dr. Harris Moak, New York City, spoke on, *The City Milk Supply*. Dr. C. F. Holton, Savannah, gave a case report, *Mutilating Injury of Arm with Skin Grafts*.

The Atlanta Neurological Society met at the Academy of Medicine, Atlanta, on February 22nd. Dr. R. M. Chapman, Towson, Maryland, spoke on, *Mental Hygiene and the Public*. Dr. Chapman is Professor of Psychiatry at the University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore. Dr. S. Bernard Wortis, New York City, Assistant Professor of Neurology, University and Bellevue Hospital Medical College, New York, spoke on *The Epilepsies and the Convulsive States*. A buffet supper was served.

Dr. G. Lombard Kelly, Augusta, has been appointed Dean of the University of Georgia Medical Department, Augusta. Dr. Kelly succeeds Dr. W. L. Moss since he resigned.

Dr. Albert Fleming, Folkston, entertained the members of the Ware County Medical Society at a shad supper in Folkston on March 7th. This has been an annual event for a number of years and it is not easy for the members to forget the date, when such an admirable host as Dr. Fleming is entertaining.

The staff meeting of St. Joseph Infirmary was held on February 27th. Dinner was served.

The Atlantic Coast Line Surgeon's Association met at Tampa, Florida, on February 24th. Dr. J. W. Simmons, Brunswick, President of the Association, presided.

#### BOOKS RECEIVED

*The Treatment of the Commoner Diseases Met With by the General Practitioner*, by Lewellys F. Barker, M.D. Contents of the book contain chapters on: Advances in the Methods of Studying Patients; Some of the Commoner Infectious Diseases; Commoner Disorders of the Respiratory System; Commoner Disorders of the Circulatory System (Heart and Blood Vessels); Commoner Diseases of the Blood and Bloodbuilding Organs; Commoner Diseases of the Digestive Apparatus; Commoner Diseases of the Kidneys and Urinary Passages; Commoner Diseases of the Locomotor System; Commoner Nervous and Mental Diseases; Commoner Diseases of the Metabolism and of the Endocrine System. Also subject and author's indices. Contains 319 pages. Publishers: J. B. Lippincott Company, East Washington Square, Philadelphia, Pennsylvania.

*Laboratory Medicine—A Guide for Students and Practitioners*, by Daniel Nicholson, M.D., Member of

the Royal College of Physicians, London; Assistant Professor of Pathology, University of Manitoba; Assistant in Pathology, Winnipeg General Hospital. Second Edition, thoroughly revised with 124 engravings and three colored plates. Contains 566 pages. Publishers: Lea & Febiger, West Washington Square, Philadelphia, Pa. Price \$6.50.

#### OBITUARY

Dr. William R. Terry, Shellman; member, Emory University School of Medicine, Emory University, 1890; aged 71; died at his home after an extended illness on February 14, 1934. He was born and reared in Webster county and received his literary education in the common schools of the county. Dr. Terry began the practice of medicine at Leary and continued there until 1900, then moved to Shellman. He was a successful practitioner and held in high esteem by all acquaintances. In addition to his medical practice, he devoted time to his farming interests and was one of the largest planters in Randolph county. Surviving him are one son, Rufus Terry, Shellman; four daughters, Mrs. C. W. Pullen, Misses Isabel, Elizabeth and Ruth Terry, all of Shellman. Funeral services were conducted from the residence by Rev. Roy McTier. Burial was in Eastview cemetery.

Dr. John Ledbetter, Eatonton; College of Physicians and Surgeons, Baltimore, Maryland, 1886; aged 79; died at his home on February 3, 1934. He had been engaged in the practice of medicine in Putnam county for more than forty years. Dr. Ledbetter was active in civic and religious affairs. He was a leading citizen of the community and state. Funeral services were conducted from the residence.

Dr. Minot K. Kellogg, Augusta; University of Georgia Medical Department, Augusta, 1933; aged 25; died at a local hospital of pneumonia on February 9, 1934. He received his early literary education at Richmond Academy, Augusta; graduated from Emory University, Atlanta, in 1929; then began the study of medicine. Dr. Kellogg was a leader in his classes and graduated with honors. He was a member of several fraternal organizations and was serving an internship at the University Hospital, Augusta, at the time of his death. Funeral services were conducted from the home of his parents at 2241 Cumming Road by Rev. E. C. Lucas and Dr. S. L. McCarthy. Burial was in Westover Memorial cemetery. Young physicians of Augusta were pallbearers.

Dr. William Crissey Kellogg, Augusta; member; Johns Hopkins University School of Medicine, Baltimore, Maryland, 1900; aged 59; died of pneumonia on February 13, 1934. He only lived four days after the death of his son. Dr. Kellogg was at one time Clinical Professor of Laryngology of the University of Georgia Medical Department. The Editor of the Augusta Chronicle, on February 15th, in his eulogy of Dr. Kellogg, among other things writes

editorially as follows: "A great citizen, a great physician, a Mason who lived up to the precepts of that noble order, a devoted husband and father and friend, Dr. W. C. Kellogg will be mourned in this community as few people have been mourned. A cultured gentleman, a scholar, one of God's noblemen, such was the gentle, kindly man whose passing we all mourn. Indeed, we shall not see his like again." Dr. Kellogg was a member of the Richmond County Medical Society, American Medical Association and the Masonic Lodge. Surviving him are his widow and one daughter, Miss Annette Kellogg, a student at Sweetbriar College, Virginia.

*Dr. J. F. J. Hood, Atlanta; Southern Medical College, Atlanta, 1901; aged 65; died at an Atlanta hospital on February 19, 1934. He practiced medicine in Atlanta for many years. Surviving him are one brother and a son. The body was taken to Bartow, Florida, for funeral services and burial.*

#### DOCTOR GEORGE YOUNG MOORE

*Resolutions Adopted by*

*The Randolph County Medical Society*

WHEREAS, in the sad passing of Dr. George Young Moore, the Medical Association of Georgia has lost one of its best beloved Ex-Presidents, a wise sage in its councils, the Randolph County Medical Society bids sorrowful adieu to its life long Secretary, who has been its inspiration for a quarter of a century.

WHEREAS, in lamenting our loss, the committee gratefully records its appreciation of his faithful services.

By his industry, tact, and geniality of manner he has made his county and district societies models for the rest of the State.

Dr. Moore was born in Laurens, South Carolina, March 4, 1868. He was educated in the public schools of his State. He received his medical education at the University of Georgia, graduating in 1888. After practicing for some time on the Carolina side of the Savannah, he soon settled in Elberton, Georgia. Here taking with him his most charming bride, Miss Margaret Oglesby, who has been his constant inspiration and helpmate, he removed to Cuthbert in 1898. Since then he has endeared himself to all of us as a neighbor and friend.

He has literally given comfort to thousands by his professional skill, kindness, tact, and love of his fellowmen. It could truthfully be said of him that he even loved his erstwhile enemies back into friendship.

He has been a member of the Chamber of Commerce, a pillar of the Baptist Church, a Rotarian, a Mason, a Knight of Pythias, and a Woodman of the World. He was city physician for several years.

He was a charter member of this, the Randolph County Medical Society, became first censor, then President, and on account of his genius was made Secretary for life so that his efforts would be continuous, efficient, and unrelenting. He has kept the Randolph County Medical Society at the head of the honor roll. He was elected member of the Council of

the Medical Association of Georgia from the Third Congressional District, and while he was councilor he brought the membership up to 100 per cent, a feat unequalled before or since by any district.

Such zeal for the organization of medicine in Georgia was bound to be utilized to the fullest by the Association so that he was elevated to the Presidency in May, 1930. It is needless to say that his administration was a fruitful one for the Association, as his poise, ready wit, and practical sagacity made him an ideal executive.

A sorrowing community, long accustomed to his innumerable deeds of unselfish kindness will revere him, and his memory will write his name high on the scroll of Randolph's honored sons, while his family and intimate friends possess the consolation that their loss is shared not only by the entire citizenry of his community, but by the entire membership of the association of medicine.

THEREFORE, BE IT RESOLVED by the Randolph County Medical Society, in regular session on February 1, 1934, that we dedicate to the memory of our secretary and friend a page of our permanent records and a copy of these resolutions be sent to his wife in token of our profound sympathy.

J. C. PATTERSON, M.D.

E. C. MCCURDY, M.D.

A. F. WEATHERS, M.D.

W. W. CROOK, M.D.

F. S. ROGERS, M.D.

W. G. ELLIOTT, M.D.

T. F. HARPER, M.D.

LOREN A. GARY, M.D.

*Committee on Resolutions.*

#### SPECIAL LECTURES AND PAPERS AT NEW YORK POLYCLINIC MEDICAL SCHOOL AND HOSPITAL

Wednesday, March 14th, a special lecture by Doctor Russell L. Cecil (Professor of Internal Medicine, New York Polyclinic Medical School and Hospital) on *Rheumatic Fever: Incidence and predisposing factors. The role of the streptococcus in rheumatic fever. Focal infection. Relation of rheumatic fever to bacterial endocarditis and rheumatoid arthritis. The heart in rheumatic fever. Modern treatment and prophylaxis.*

Monday, March 5th, Stated Meeting of the Clinical Society of the New York Polyclinic Medical School and Hospital, with the following program:

1. *The Educational Program of the American Medical Association.* William D. Cutter, M.D. (Chicago).

Discussion opened by John A. Hartwell, M.D. (by invitation) and Harold Rypins, M.D. (by invitation) (Albany).

2. *Cancer of the Stomach.* J. Shelton Horsley, M.D. (Richmond).

Discussion opened by Harlow Brooks, M.D. Allen O. Whipple, M.D. (by invitation) and the Surgical Staff of the Hospital.

General discussion.



# PROPOSED MODIFICATION OF C. W. A. RULING

Miss Gay B. Shepperson,  
Civil Works Administrator for Georgia,  
Atlanta, Georgia.

My dear Miss Shepperson:

First permit me to assure you that this is not a complaint against your local administrator or her office force.

At the meeting of the Turner County Medical Society, held early in January, it was disclosed that a wide variance existed in the amount of work delegated to the various members by the C. W. A., and subsequently your local administrator's attention was called to the following instructions of the United States Employees' Compensation Commission:

"3. Request that they work out with you a mutually satisfactory plan for distributing the compensation work among physicians on the list in as equitable a manner as possible."

Whereupon, we were informed that the "family physician" relationship governed in all cases and the employee had the right to choose the physician.

It is not doubted that this provision was incorporated in your regulations at the request of the medical profession; but its operation, particularly in rural sections, is objectionable, on the following grounds:

1. Granted that the "family-physician" relationship should generally be inviolate—that it is a sacred relationship resting upon sentiments of gratitude, affection and intimate personal relations, yet I boldly assert that with many of your employees it is a very weak attachment and usually sundered by presentation of the first bill for medical service.

2. Many of your employees have run the gamut of the local profession, except perhaps the latest arrival in the community, and still owe most of them. Naturally, the pricks of conscience and not attachment for or the prestige of any particular physician determines their choice.

3. Generally it is not a particular physician they want, but medical service. Formerly it was their practice to try to obtain one physician after another until finally successful in securing service, but now, in their newly-found independence, they dictate.

4. "Beggars should not be choosers." Charity hospitals assign physicians to certain wards for stated periods. The choice of their physician is not left with patients.

5. The general character of the individual employee is known to your local office force. Should not discretion be used in the matter of delegating choice of physician in many cases, especially if physician chosen has already received a preponderant amount of work?

6. It is submitted that a fair test of the "family-physician" relationship in many cases would be the following:

What physicians here have you used in the past? What physician did you last use? Why did you change physicians?

The answer will probably disclose that several

physicians have been used, but will not always indicate the exact reason why a change of physicians was made. However, the fact that many changes have been made would clearly prove that that individual did not regard very highly the "family-physician" relationship. In that event, assign the physician ranking lowest in amount of work previously performed.

7. The physicians longest in this community hold unpaid accounts in amounts from a few dollars to many hundreds against most of your local employees. Your present system of apportioning work among physicians is scant reward for the men who have cared for these people in the past and tends to perpetuate an injustice.

8. Perhaps the most valid objection to a rigid adherence to the regulation is that it permits and tends to promote, by some unscrupulous practitioners, the "drumming-up" of business, both through personal effort and use of "runners", whereas a more equal distribution of all cases among an eligible list of physicians would frustrate such unethical activities and conserve allotted funds for legitimate purposes.

THEREFORE, the Turner County Medical Society respectfully requests that some modification be made in your instructions to local administrators governing the assignment of physicians to employees.

With the hope that I have not greatly added to the burden of your trying position, I am,

Respectfully yours,

J. H. BAXTER, M.D.,

*Secretary-Treasurer,*

Turner County Medical Society.

Ashburn, Georgia.

February 14, 1934.

## WHAT EVERY WOMAN DOESN'T KNOW— HOW TO GIVE COD LIVER OIL

What every woman doesn't know is that psychology is more important than flavoring in persuading children to take cod liver oil. Some mothers fail to realize, so great is their own distaste for cod liver oil, that most babies will not only take the oil if properly given but will actually enjoy it. Proof of this is seen in orphanages and pediatric hospitals where cod liver oil is administered as a food in a matter of fact manner, with the result that refusals are rarely encountered.

The mother who wrinkles her nose and "makes a face" of disgust as she measures out cod liver oil is almost certain to set the pattern for similar behavior on the part of her baby.

Most babies can be taught to take the pure oil if, as Eliot points out, the mother looks on it with favor and no unpleasant associations are attached to it. If the mother herself takes some of the oil, the child is further encouraged.

The dose of cod liver oil may be followed by orange juice, but if administered at an early age, usually no vehicle is required. The oil should not be mixed with the milk or the cereal feeding unless

allowance is made for the oil which clings to the bottle or the bowl.

Mead's 10 D Cod Liver Oil is made from Mead's Newfoundland Cod Liver Oil. In cases of fat intolerance the former has an advantage since it can be given in 1-3 to 1-2 the usual cod liver oil dosage.

### BAROMETERS OF HEALTH

By Carl E. Buck, Dr. P.H., American Public Health Association.—It will not be long now before the prophets of the Great Depression will be superseded by the historians. Perhaps the very men who have been telling us how to get out of the Slough of Despond are the ones who will recount its benefits. When the time comes that those of us who felt the wounds can jest at our scars, which seems not far off, we shall be in a better mood to accept anew the knowledge that scar tissue is tougher than the fibres which it replaces.

But suppose there are wounds upon which scars do not form? These are sure to be weaker. Leaving to others the task of assaying those factors in the social order which have been strengthened by the depression, this writer wishes to point out that there are places in the body politic where the raw flesh is still exposed, where no scars can form until more nourishment has been supplied.

The maintenance of adequate appropriations for basically necessary health protection should be of paramount concern to all those who are honestly interested in the future health of our people. Yet public health budgets have been and still are being severely and in some instances disastrously cut. The splendid health record of the past several years may have led large numbers of our people to adopt an attitude of "laissez faire" but we must not permit this feeling of false security to lead to the destruction of their own health.

The fundamental function necessary for effective public health service is public health education and like all education it must be continuous. An interruption of a year or two might result in severe increases in the incidence of preventable diseases. We must have not only education but the services necessary for carrying out the precepts of that education. For this work adequate appropriations are essential. As one eminent health officer of this country said in addressing his council: "Gentlemen, it is your privilege to cut the health appropriation of this city. If you do so the responsibility for determining the disease rates and death rate will be yours and not mine." The health budget was not cut.

Back in the days when we knew little or nothing concerning the means of spreading disease, great scourges of plague, cholera, yellow fever, typhoid fever and smallpox periodically swept through great areas of population leaving in their wake appalling numbers of dead. These scourges can and will happen again if our protective measures are not maintained. It is only by dint of the effective application of gradually

developed scientific knowledge and continual education that during the past thirty years tuberculosis has been reduced from the most important cause of death in the United States to sixth place. There is no palliative or substitute for disease prevention. Failure to keep up our work would unquestionably eventually lead to a recurrence of the disease scourges of the dark ages.

Many of the predisposing causes of more serious conditions are already with us such as inadequate or improper diets, children unprotected against preventable diseases, and the failure to maintain healthy habits of living.

Because of the presence of these predisposing causes and because of the fact that lowered incomes have made it necessary for people to live closer together and thus increased their chances of exposure to disease, it is now more than ever before necessary to maintain health facilities which will curb these predisposing causes and prevent the occurrence of unnecessary serious illnesses and deaths.

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# THE JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA

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## CARCINOMA OF THE THYROID

### *An Early and Unusual Case*

FERDINAND C. LEE, M.D.

*Augusta*

Carcinoma of the thyroid gland is not rare, but to find such a condition in a child eight years of age is out of the ordinary, particularly when the type and course of the growth is exceptional. We feel that the case herewith reported is one of the earliest, if not the very earliest, instance of papillary adenocarcinoma of the thyroid gland.

A. B. S., a girl of eight years, was first admitted to the University Hospital at Augusta, on April 19, 1933, with the complaint of nervousness. The child has been a ward of the local Juvenile Court and nothing is known of her family history and very little of her past history, except that she had had chicken-pox and that she had been given Lugol's solution for an enlarged thyroid gland at a local charity institution. Her illness dated back two months before admission when she had noticed a swelling in her neck. The swelling had been accompanied by soreness in the throat, and the accompanying irritation had been one of her chief complaints. She had been attending school and seemed to have gotten on well in her classes.

On admission to the hospital, she had a temperature of 100 degrees F.; pulse 88; respiration 22; urinalysis, Wassermann test and von Pirquet test negative; W.B.C. 8,000; R.B.C. 4,350,000; Hb. 70 per cent. The general physical examination was negative with the exception of the pharynx, which was slightly red and injected. The thyroid gland was fairly symmetrically enlarged, being slightly larger on the left side. There were no eye signs indicative of thyrotoxicosis. The patient was put to bed. The basal metabolism determination at this time was plus 61. At the end of eight days the thyroid gland seemed to have become smaller. Two weeks after admission the patient had a vaginal discharge in which the gonococcus organism was identified. She was treated energetically for this vaginal discharge with douches of potassium permanganate and mercurochrome so that after three weeks the vaginal smear was negative for gonococci. The discharge became less for a while, but then again was

positive for gonococci. She was then given 1 per cent silver nitrate instillations into the vagina and following this treatment the smears were negative for gonococci. Later silver nitrate jelly was substituted for the solution. In the week before dismissal on July 9, 1933, a basal metabolism determination was made; the reading was plus 34. The thyroid gland did not seem to have decreased in size.

She was admitted a second time on Aug. 18, 1933, with a diagnosis of hyperthyroidism. One of the attending surgeons noticed a nodule about 1 x 2 inches in the isthmus of the thyroid and several smaller nodules in the left lobe, one of which was half an inch in diameter and hard. He also noticed a fine tremor in the fingers. Two basal metabolism determinations were made, one on August 19, giving a rate of plus 29, and one five days later, giving a rate of plus 42. An x-ray of the chest was reported by Dr. L. P. Holmes as follows: "Flat film of thorax shows it slightly full over the right side; slight general cardiac enlargement. Diaphragms negative. Both lungs show considerable increase of hilus and bronchial shadows, with slight pleural thickening over the left lung. Light inter-lobar pleural thickening right. Possibly a childhood tuberculosis." The urinalysis was negative; W.B.C. 5,200; R.B.C. 3,850,000; differential white blood cell count showed polymorphonuclear cells 51 per cent; lymphocytes 48 per cent; monocytes 1 per cent.

The patient was first seen by me September 1. The thyroid gland was symmetrically enlarged, with the exception of the left side where two small masses each about 2 cm. long and 1 cm. wide were situated below the upper pole. The thyroid gland itself was smooth and hard, no areas of fluctuation could be determined. When the patient swallowed, the region immediately below the isthmus retracted, suggesting the adhesion of the ribbon muscles of the neck. The whole thyroid gland and trachea could readily be moved from side to side without embarrassing respiration. There had never been a history of respiratory distress. The skin over the thyroid gland was normal in appearance and texture, with no engorgement of the deeper subcutaneous veins. No bruit was noticed over any part of the enlargement. No lymph glands, with the exception of the two masses already described, could be palpitated anywhere in the neck. There were no eye signs suggestive of hyperthyroidism. There was no tremor of the hands, no exaggeration of the reflexes, no tachycardia; in brief, no evidence of thyrotoxicosis. Examination of the vocal cords showed them to move

equally on the two sides. A diagnosis of Riedel's thyroiditis was made, and a double partial thyroidectomy was performed on September 5. When the sternothyroid and sternohyoid muscles were reached it was found that they were adherent to the thyroid gland and were dissected free with difficulty. Because of the invasiveness of the pathologic process it was still felt that a Riedel's thyroiditis was the diagnosis. The right lobe of the thyroid gland proved to be small, 2 cm. wide at the isthmus and its greatest total length was about 3.5 cm., its width lateral to the trachea was about 2.5 cm. The upper pole was densely adherent to the surrounding structures, but it did not extend behind the trachea.

The isthmus was firmly attached to the trachea and considerable care was necessary in dissecting it free. The inferior thyroid vessels were clamped and the whole of the right lobe removed, with the exception of a small portion at the superior pole which seemed normal. The left lobe was treated in the same way except that more of the gland was allowed to remain. The gland itself was vascular and friable, the firmest portion being at the isthmus. All vessels were ligated with silk. After two small protective drains were inserted on each side of the trachea the incision was closed with interrupted sutures of silk, approximating the ribbon muscles and also joining the platysma. A continuous silk suture was placed in the skin.

The report of the pathologist, Dr. E. R. Pund, was as follows:

"Adenocarcinoma of the thyroid; in many places the new growth is cystic papillary in type. The blood vessels are invaded; much of the pre-existing thyroid is destroyed and there is some connective tissue reaction with occasional lymphocytic infiltration. The tissue removed is in several fragments, two are 2.5 x 2 x 3.5 cm. and represent thyroid gland mostly replaced by the new growth. Two smaller fragments are normal thymic tissue. One small lymph node is seen without metastases."

The patient made an uneventful recovery following this operation, except that on the fourth post-operative day the temperature rose to 100 and increased progressively to 103.8 a week after operation. At this time the pulse was 130. In spite of the fever the patient seemed to be in good condition. The tonsils and pharynx were slightly injected. The blood examination showed W.B.C. 5,850; Hb. 60 per cent; polymorphonuclears 48 per cent; lymphocytes, 44 per cent; monocytes 6 per cent; unclassified 2 per cent. It was difficult to explain the fever in view of the general good condition of the patient and the low white blood cell count. A smear from the pharynx was positive for streptococci. The throat was mopped every three hours with mild proteinate of silver and the temperature gradually subsided to normal after three days. However, the two masses in the left side of the neck which were noted before operation became markedly larger, each being 2.5 cm. long and 2 cm. in diameter. They were only slightly tender to pres-

sure and were freely movable. In view of the report of the pathologist it was difficult to decide whether these masses were due to metastases from the primary thyroid growth or to the infection of the throat. At all events, tonsillectomy was decided upon and both tonsils were removed by Dr. W. J. Williams on September 26. The pathologic report on these tonsils showed that they had only irregular scarring. The patient made an uneventful recovery from the tonsillectomy and the two masses in the left side of the neck became progressively smaller so that they were no larger than before the original thyroid operation.

The patient was discharged October 4, and re-admitted November 17, for the removal of the two masses in the left side of the neck. These two masses were relatively small and firmly attached to the internal jugular vein, a part of which had to be removed with the mass. The pathologic report was:

"Papillary adenocarcinoma, invasion of venules. The tissue removed is a mass 3 x 1.5 x 1 cm., in part encapsulated but there is invasion of the capsule." (Dr. E. R. Pund). The smaller mass was about one-third the size of the larger one and was separate and distinct, without any firm attachment to surrounding structures. It looked like a small lymph gland, but a little more yellow in color than such a gland.

The patient was discharged November 23, and has since received x-ray treatments from Dr. L. P. Holmes.

### Discussion

This case shows several unusual features. In the first place the diagnosis of Riedel's thyroiditis was made on the basis of a small, firm, uniformly enlarged gland in a child who had had a severe attack of gonococcic vaginitis, although this infection occurred while the child was in the hospital and apparently after an enlargement of the thyroid gland had been noted. Nevertheless, there was a possibility that the infection may have played an important part in developing the thyroid disease. The other possibility, namely, carcinoma of the thyroid gland, was not seriously entertained because the patient was only eight years of age and had had a slight enlargement of the thyroid gland for almost a year. Certainly the growth of the gland had not been rapid and therefore the condition suggested itself as being a relatively benign process, and not a malignant one. It is true that there was no waxy pallor indicative of myxedema and thyroiditis (Eberts and Fitzgerald), yet infection was prominent in the background. Even at operation, when the ribbon muscles of the neck were found adherent to the gland, an inflammatory



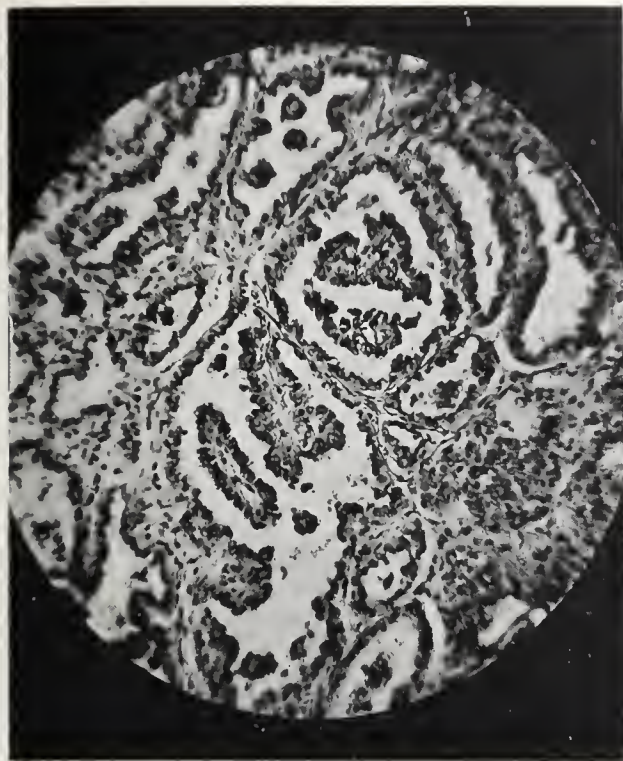


FIGURE 1

Shows the papillary characteristics of the carcinoma in the thyroid gland. There are very few mitotic figures.  $\times 120$ .

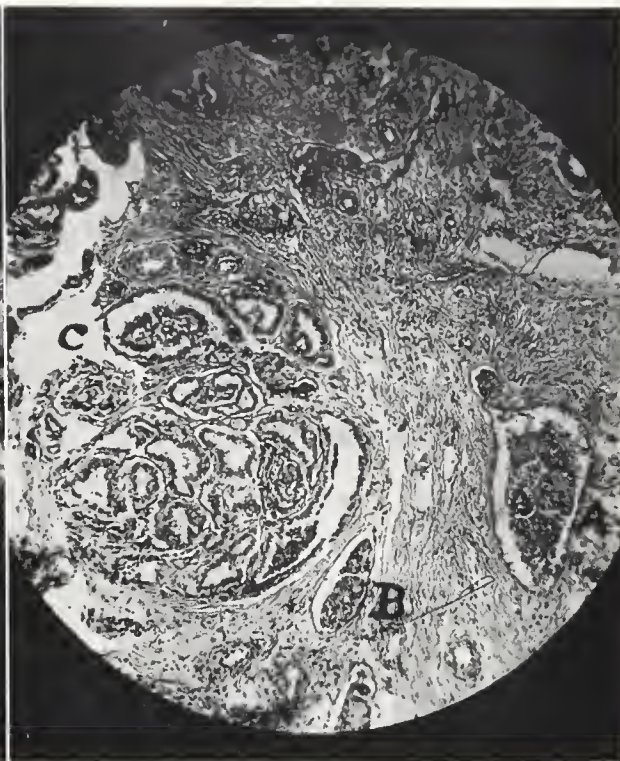


FIGURE 2

Shows cancer, C, in a metastatic nodule in the left side of the neck; A and B show the cancer growth within veins.  $\times 60$ .

process was considered the basis of the disease. However, not enough weight was given to the presence of the two small masses in the left side of the neck, which were indicative of malignancy (Craver), and are not usual in cases of Riedel's thyroiditis. On the other hand, carcinoma of the thyroid gland is usually nodular and the smoothness of the surface of the gland with symmetrical enlargement has always been used as an index of thyroiditis and not carcinoma. According to Joll, a differential diagnosis between Riedel's thyroiditis and certain malignant diseases of the thyroid gland is almost impossible.

Another curious condition was the sudden increase in size in the two small masses in the neck following the first operation. In view of the diagnosis of carcinoma it was natural to think of a rapidly growing metastasis as the cause for this enlargement, but since the original tumor in the thyroid gland had grown very slowly, such a sudden and rapid growth of metastasis was naturally not looked for, even though operative interference promotes metastatic development. Still more unusual in this connection was the fact that the masses in the neck became smaller following tonsillectomy, a relationship be-

tween the tonsil and lymph gland on an infectious basis being indicated. But since no other lymph glands in the neck were enlarged during the time of the tonsillar infection it was peculiar that the masses having thyroid carcinomatous metastasis should be the only ones involved. Perhaps the answer lies in the possibility that these two masses never were associated with lymph glands, but were simply outlying masses of the tumor (Joll), but their decrease in size after tonsillectomy still remains unexplained.

The type of tumor growth is also remarkable in that the primary tumor cells are definitely papillomatous with very few mitotic figures (Fig. 1), and yet there is an extensive invasion of the veins (Fig. 2).

Obviously papillomatous structures do not penetrate veins unless the papillomatous nature of the growth carries signs of rapid cell proliferation, as is indicated by mitotic figures. However, in this case the mitotic figures were exceedingly difficult to find, yet the veins were full of the papillary growth. And in this connection it must be added that examination of the chest by x-ray and physical methods had failed to find any evidence of metastasis to the lungs, in spite of the marked invasion of veins in the tumor area.

Why the growth was not disseminated more by the blood stream is worthy of more investigation.

Of course the most striking feature of the case was the youth of the patient. A search of the literature has failed to show any case of carcinoma of the thyroid gland younger than the one here reported. Ewing, in his classical book on neoplastic diseases, third edition, 1931, lists a case of a round cell sarcoma of the thyroid gland in a boy three years of age, and that of carcinoma in a boy five years old. Obviously the case of sarcoma is not under discussion here, since carcinomas are being dealt with. However, the case of carcinoma in the five year old boy resolves itself into that of a sarcoma in a five and one-half year old girl when the original report is consulted (Demme). One of the nearest cases from point of view of age is probably the one described by Hughes, in 1920, but this case first of all was in a child thirteen years of age and the growth was only on the right side, and was nodular in character. These nodules resembled cysts into which hemorrhage had occurred. A yellowish caseous material, which proved to be intracystic papillomatous growth was expressed from these cysts. The microscopic description in this case is too brief to indicate the histologic picture and we have no idea as to the number of mitotic figures and papillomatous characteristics. In fact the report is almost inadequate to establish the diagnosis of papillary carcinoma. The description indicates it to have been more of the simple adenomatous type, rather than the papillary type.

With the exception of the case reported in this article, the eleven year old patient described by Cattell is probably the earliest on record.

As regards incidence of carcinoma of the thyroid gland it may be mentioned that the report of Wilson from the Mayo Clinic in 1921 showed 290 cases of thyroid cancer in a total of 11,549 goiter cases, or 2.5 per cent. Clute and Smith, from the Lahey Clinic, in 1929, reported 67 cases of thyroid cancer in a total of 3,389 thyroid cases, or 1.68 per cent.

With respect to treatment, the consensus of opinion seems to be crystallizing that excision and radiation are the procedures of choice. Stewart has recently (December, 1933), reviewed the radiosensitivity of these tumors. Tinker has presented the results in his cases and was able to state that adenocarcinomas were the most favorable for treatment and that excellent results were obtained in papillary carcinomas. Using operation and radiation, he had one patient with carcinoma of the thyroid gland alive after thirteen years and two other cases had been living eleven years after treatment. He had many cases that were still living for a less period of time.

#### Summary

A case is reported of papillary carcinoma of the thyroid gland in a girl eight years of age and it is believed that it is one of the earliest, if not the very earliest, of this condition on record.

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#### RADIATION IN PRIMARY OPERABLE BREAST CANCER

Douglas Quick, New York (Journal A. M. A., Dec. 30, 1933), states that, heretofore, irradiation has been limited almost entirely to postoperative treatment in primary operable cancer of the breast. Postoperative irradiation has improved the five-year curability results. The experience to date warrants advancing the status of radiation therapy in this group of cancer. Preoperative irradiation is probably of greater relative value than postoperative. In all cases of radical mastectomy, preoperative and postoperative irradiation should be employed. While the ovarian hormone evidently exerts an influence on the development of some breast cancers, there is no substantial evidence to warrant castration by irradiation as a therapeutic aid. As the sole means of treatment, irradiation is justifiable and undoubtedly preferable in certain cases. To consider irradiation alone the method of choice in all cases of this group is premature. Cases treated by radiation alone require biopsy not only for guidance in therapy but also to complete the record. Biopsy is safe if carefully done after preliminary irradiation.



# CANCER OF THE LARGE BOWEL\*

RALPH N. JOHNSON, M.D.

Rome

## Introduction

The large bowel is that portion of the alimentary tract extending from the ileocecal junction to the anus. It is divided into the following parts: cecum, ascending, transverse, descending, and sigmoid colons, and rectum.

Cancer is the most common as well as the most important tumor of the large bowel. Like cancers in other parts of the body, the exact cause is not known but certain predisposing factors should be considered. Trauma and chronic irritation may be predisposing factors. Kraske could find no grounds for assuming that misplaced embryonal tissue is concerned in the development of rectal carcinoma. However, there are certain points of normal constriction or of physiologic stasis in the colon that may play some role in the chronic irritation theory.

These cancers are very important because experience has shown that they respond more readily to treatment than any other type of internal malignancy. If they are diagnosed early, and the proper operation performed, the patients get relief of symptoms and some cases are probably completely cured.

The late Dr. John B. Deaver reported cases of people who were still alive ten to seventeen years after operations for intestinal cancer. Among these was a physician living in Philadelphia, who, at the time of his operation, was fifty-nine years of age. The terminal ileum, cecum and ascending colon were resected. The pathologic report was adenocarcinoma. The doctor was in excellent health when last heard from, in spite of his 75 years, never having had the slightest symptoms.

## Location

About 75 per cent of intestinal cancers occur in the rectum. The next most common site is the sigmoid. Other intestinal malignancies usually occur in the following frequency: cecum, transverse colon, descending

colon, splenic flexure, ascending colon and hepatic flexure.

## Age

Forty years and upward is the usual age for this type of cancer, but younger individuals do have these tumors. The youngest case to come under my observation was thirty years of age, while the oldest was seventy-six. It is likely that some of the cases reported in children were really inflammatory processes. Both sexes have the disease but it is slightly more common in the male.

## Pathology

Cancers of the large bowel are usually single, although they may be multiple and this fact must be kept in mind when operating for a cure or relief. The tumors may involve the entire circumference of the bowel or be limited to one part; most often they originate on the posterior wall. The tumor grows slowly and has a strong tendency to be circumscribed in the extent of its invasion of the bowel.

Metastases develop slowly and are seldom present until after the growth has given fairly distinct warnings of its presence.

The tumor involves the bowel as a nodular mass, as a tubular or annular infiltration, or what is more frequent, a combination of these forms. It may begin as a polyp.

There are three distinct types of cancer of the colon. (1) The adenocarcinoma, which produces at first circumscribed elevations in the mucosa that gradually extend deeply and laterally, obstructing the bowel and soon ulcerating.

(2) The stenosing fibrocarcinoma, which produces first a superficial ulcer with pronounced induration due to fibrosis. The lesion may be circumscribed while involving all the coats, but there is a tendency to encircle the lumen and produce a tight annular stricture with its various complications.

(3) The mucoid or gelatinous carcinoma is characterized by its tendency to spread widely over a considerable length of intestine, by the production of a bulky tumor mass in which the original tissues are extensively replaced by gelatinous material. The latter type is seen in the colon, but never in the rectum. The rectal carcinoma is usually the

\*Read before the Seventh District Medical Society, Cartersville, September 27, 1933.

adenocarcinoma of the cylindrical cell type, or the scirrhous carcinoma, which encircles the bowel rather early in its development.

### *Symptoms*

In the earliest stages of cancer of the bowel there are no symptoms. The onset of intestinal disturbance in a middle-aged individual who previously has been free from digestive disease and who has not made any recent change in his diet or habits is the most characteristic point in the clinical history and should always arouse suspicion.

The intestinal disturbance may be constipation or diarrhea or a combination of the two. Most of these individuals present such complaints as: severe abdominal pain, progressive loss of weight, bloody stools, tenesmus and hemorrhoids. Naturally, the location of the abdominal pain varies with the location of the lesion.

### *Diagnosis*

A good history and physical examination aid greatly in helping to diagnose these tumors. Certain laboratory tests are valuable. Diagnosis is seldom made from ribbon stools. A careful digital or proctoscopic examination will usually pick up a cancer of the rectum or lower sigmoid, while cancers higher up are usually found after a barium enema has been given and a characteristic filling defect demonstrated on an x-ray plate.

### *Treatment*

*Operative.* In cancers of the colon an early resection of the affected part should be done unless there are contraindications. An extensive resection is not absolutely necessary and care should be taken to preserve a good blood supply for the remaining bowel.

The Mikulicz is an excellent operation for a cancer of the ascending or descending colon provided the tumor is not too widespread. The Kraske operation for rectal cancer is rapidly losing its popularity and is giving way to the abdominoperineal operation, devised by Miles, Jones and Coffey.

If the tumor is widespread, a colostomy proximal to the tumor mass will frequently relieve the patient's symptoms indefinitely and will make them more comfortable.

*Palliative.* Radium is indicated in some cases of inoperable cancer of the rectum. It

seems to retard the growth of the tumor, lessen the bleeding and discharge, and increase the general well-being of the patient. Some patients get a violent reaction following the use of radium in the rectum, hence it should only be used in carefully selected cases. Patients who are extremely cachectic should not receive radium treatment.

X-ray exposures are used for palliative treatment of inoperable tumors, but their value is much doubted.

### *Prognosis*

Prognosis depends upon how early the cancer is diagnosed, and whether there are metastases or not. If metastases are present, the outlook is hopeless. If absent, and an early resection done, a cure is sometimes the result.

### *Conclusions*

1. Early cancer of the colon and rectum is curable.
2. These types of cancer metastasize late.
3. Surgery is the ideal treatment.

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## OVERLOOKED FRACTURES

LESTER HARBIN, M.D.  
Rome

The following cases are reported because of the embarrassing moments which they have caused me and my associates.

*Case 1:* J. W., a male, 18 years of age, one week before examination was hit on the finger by a baseball. He thought it was only bruised and after one week of pain and discomfort he came in for examination. A roentgenogram revealed a fracture of the base of the middle phalanx of the left middle finger. A small chip of bone was displaced toward the palmar surface of the finger and the base of the middle phalanx was consequently quite broad. There was also a partial dislocation of the middle phalanx of the proximal interphalangeal joint. A second roentgenogram revealed that union had occurred in the position described above.

*Case 2:* M. C., a female, 68 years of age. Five months previous to the examination she had a fall to a sitting position while walking in her yard. She was unable to get up and had to be carried into the house. She remained in bed for three weeks on account of the pain in the back, not having consulted a doctor at that time. One month ago she fell a second time and the pain in her back became more severe. She then



consulted two physicians who told her that the pain was due to rheumatism. A roentgenogram revealed a compression fracture of the body of the 12th thoracic vertebra. There was marked destruction of the body of the 12th thoracic vertebra and the outline of the anterior border of the body of the involved vertebra was very indefinite. The body had a wedge-shaped appearance and there was a slight kyphosis of the spine.

*Case 3:* M. M., an adolescent male, three weeks before examination had fallen and the palm of his left hand received most of the weight of his body. His elbow was dislocated and he was treated for this condition. The deformity and pain persisted and a roentgenogram of the elbow revealed a supracondylar fracture of the humerus with a posterior displacement of the distal fragment of the humerus. There was some callous formation between the posterior aspect of the humerus and the displaced fragments.

*Case 4:* T. T. was a male, 70 years of age. Three weeks previous to examination a large stack of lumber fell on the right foot, which became markedly swollen and painful. He continued to walk on the injured foot and since the pain did not disappear the patient came to the hospital for treatment. A roentgenogram revealed a fracture of the posterior portion of the os calcis with upward displacement of the detached fragment which was about 4 cms. in length.

*Case 5:* N. F., a male, aged 22 years, six weeks previous to examination had injured his thumb while playing baseball. He was advised that the bone was bruised and that his finger would be all right in a short period of time. Progress was not satisfactory and the thumb was still quite painful six weeks after injury. A roentgenogram of the thumb revealed a fracture of the head of the proximal phalanx with slight anterior displacement of the head of the phalanx. There was moderate callous formation and some arthritis of the interphalangeal joint of the thumb.

*Case 6:* W. P. M., aged 50, five weeks before examination had crushed his hand while working. He was given first aid treatment by his employer and was allowed to continue his work. The hand was swollen and painful, did not prevent working, but his pain was more acute when he tried to grip any object. The continuation of pain and the small lump on his hand prompted us to make a roentgenogram which revealed an incomplete transverse fracture of the shaft of the 5th metacarpal, just proximal to the mid portion of the shaft, and a transverse fracture just proximal to the head of the 5th metacarpal with anterior displacement. There was callous formation at the fracture sites.

*Case 7:* R. T. was a female aged 55 years. Three weeks previously the left thumb was mashed by a door and was treated as a bruise. The thumb remained painful with limited function. A roentgenogram revealed a T shaped fracture of the base at the distal phalanx of the left thumb extending into the interphalangeal joint with spreading of the base of the injured phalanx.

*Case 8:* O. N. L., a male, aged 50 years, fell from the top of a door, striking a concrete floor, injuring his back and hands. Along with a sacro iliac sprain both wrists were sprained. He remained in the hospital and was treated for his injured back. Progress was very satisfactory as far as his back was concerned. A roentgenogram of his spine and pelvis revealed no evidence of fracture. The sprained wrists were not considered as serious. After returning to work the pain in the left wrist persisted. A roentgenogram of this wrist three weeks after the injury revealed a transverse fracture of the scaphoid without displacement.

A review of these cases shows that 5 or 62.5 per cent of the fractures were in the small bones of the hand, 1 or 12.5 per cent each in the spine, foot and arm. The average length of time which elapsed between the time of the injury and the time when the correct diagnosis was made was 39 days. Seventy-five per cent of these cases were primarily treated by physicians without a correct diagnosis and 4 or 50 per cent of these patients continued to carry on their usual activities without having such fractures treated.

This small series of overlooked fractures is not sufficiently large to justify any definite conclusions, but it is certainly large enough to make one realize more strongly than ever that fractures are overlooked, undiagnosed and not treated properly in many instances. The end results under such circumstances must be unsatisfactory. In addition to disability the chief factor which prompted these patients to seek advice and roentgen examination was pain. The reason for this delay in examination and treatment is that the laity does not realize that fractures can occur without marked deformity and with little immediate pain. A certain number of these fractures occur and the patients continue to work for sometime before the pain becomes severe enough to require treatment. Fifty per cent of the cases in this series continued their normal activities before discovering the presence of fracture. An excellent example of the ease with which fractures are overlooked is found in case 7. This patient was a hospital employe, injured her thumb while at work and was seen by several physicians at frequent intervals before anyone suggested that a fracture might be causing the persistent pain and swelling in her thumb. After three years she still has

limited movement in the interphalangeal joint of her thumb and pain at intervals. There is no reason why this patient should not have had a roentgenogram at the time of her injury except that no one suspected that she had a fracture.

In the hand where injuries are frequent, and the bones small, fractures are more often overlooked than those which occur in the larger bones. Fifty per cent of the cases in this series involved the hand and wrist. Most patients earn their livelihood with their hands and the long period of loss of function which accompanies maltreated fractures is from an economical viewpoint in the aggregate very expensive. The cost of roentgenograms of hands and fingers is quite small in comparison to the cost of the period of disability. Fractures of other bones also present a serious economic problem; especially fractures of the spine. The spine is a frequent site for undetected fractures. Compression fractures of the vertebral bodies are often overlooked (case 2) and when this occurs the period of disability which, under the best circumstances, is long, is increased to many months, years at times, and occasionally some disability will persist for life.

Both patient and physician suffer from overlooked and improperly treated fractures. Juries are awarding damages for failure to take roentgenograms of fractures. Such conditions should force physicians to have roentgenograms made on all fracture cases. The patient is frequently at fault as often as the physician. In this series the patient was 25 per cent at fault, since they did not come for treatment and the doctors were 75 per cent at fault since they did not suggest roentgenograms at the onset. The x-ray can change the position of the physician from one of doubt to one of certainty, consequently a case with a suspicious fracture or with a sprain should have a roentgenogram, notwithstanding the conservative judgment of medical attendants. Accusations concerning useless roentgenograms when a fracture is not found after it was suspected are frequent. The response to such an accusation should be that a negative roentgenogram is of as much value to the doctor and consequently of the same value to the patient as is a positive roent-

genogram. Adequate treatment depends entirely upon whether or not a fracture is present. In doubtful cases this fact can only be established by means of the roentgenogram. There are, of course, many circumstances which will prevent us from carrying out roentgen examinations and under such circumstances carefully conducted physical examinations will usually safeguard serious omissions but errors pro and con are irremediable.

I do not mean to infer that the x-ray is a 100 per cent method of detecting fractures. Some fractures of the skull are very difficult to demonstrate roentgenologically. Such cases are discouraging. At the present time, however, the x-ray is the best and most efficient means of detecting fractures. It should be used more often in doubtful cases.

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## AMEBIASIS\*

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### *Case Reports*

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H. M. TOLLESON, M.D.

*Hahira*

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The problem of amebiasis in the United States, and particularly in the Southern United States, is one of more importance than is generally believed and is one not as yet well understood. In the first place, there has unfortunately been for some time considerable confusion as to the terminology in describing the condition. Amebic dysentery in the minds of many has been considered synonymous with amebiasis.

This is certainly not true, as dysentery is only a symptom of amebiasis, usually a late one, not by any means a constant one, and, in my limited experience, not even a usual one. Many of our textbooks and even recent treatises on the subject apply the term "Amebic Dysentery" to the entire subject of amebiasis. The term amebiasis covers the entire condition characterized by infection with *endamoeba histolytica* with its varying symptoms or absence of symptoms.

As to the incidence of amebic infection, authors differ widely. Charles F. Craig, of

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\*Read before the Twelfth District Medical Society, Vidalia, July 14, 1932.



New Orleans<sup>1</sup>, states that he believes from 5 to 10 per cent of the population of this country harbor *endamoeba histolytica*, and that a conservative estimate would be 1 per cent. Although this may seem high at a glance, there is undoubtedly some foundation for his assertion. Certainly it is true that if we look for the ameba we will find it in a surprisingly increasing number of cases.

The all important point at this time is to realize that dysentery is usually a late manifestation of the disease as is abscess of the liver and that there is no more logic in waiting for the appearance of these symptoms before looking for the infecting agent than in waiting for hemoptysis, constant cough, and night sweats before suspecting the existence of tuberculosis. The prognosis in amebiasis, as in practically all diseases is favorable in direct proportion to the duration of the condition at the time treatment is begun.

There is no doubt that amebiasis is more prevalent in the southern states, particularly in low-lying or swampy regions than has heretofore been admitted. In my small practice in a small rural community in the past two years I have found and observed six unquestionable cases of amebiasis. It must be considered that I have had opportunity to see only a small fraction of the population as patients and have examined the stools in only a small percentage of those patients. Therefore, in the light of these facts, six cases would indicate a rather large incidence of infection.

The symptomatology of amebiasis is varied and apt to be overlooked. The symptomatology is not in proportion to the pathology. This raises the question of the pathogenicity of the *endamoeba histolytica*. Since large numbers of the protozoa have been found in the stools of persons who exhibit practically no symptoms it has been suggested that amoebae may live in the intestinal tract of man without actually invading the tissues or causing any tissue reaction. This is hardly possible. *Endamoeba histolytica* has been definitely shown to be pathogenic to man and it has also been shown<sup>2</sup> that marked amebic ulceration may exist in the intestine in individuals who present no symptoms of dysentery or history of infection. Bartlett<sup>3</sup>

offered most striking proof that serious pathological lesions of the large intestine may exist without any symptoms noticeable to the patient or medical attendant. Abscess of the liver may be the first evidence of the disease. Certainly these protozoa are agents of disease in their human hosts and the mildness or absence of symptoms should not mislead one into a negligent attitude in regard to treatment.

As stated, there may be no symptoms. However, most patients will complain of at least a lack of enthusiasm in the performance of their daily routine. There may be fatigability, general malaise, low irregular fever, vague digestive disturbances, loss of weight and a motley group of varied and variable symptoms which singly or collectively fail to indicate amebic infection as the source of the trouble.

There may be deficiency symptoms. In one of my cases a diagnosis of pellagra had been correctly made by a good internist. However, the man's diet was above reproach. His wife ran a boarding house and his table, from my own observation, offered a variety of proteins, carbohydrates, fats and vitamins which could not be excelled. His wife was a stout, healthy individual, on the same diet. The patient had a typical early case of pellagra as a result of his heavy infection with *endamoeba histolytica*. Instead of his food supplying his own organism alone, it was supplying thousands of organisms resulting in a deficiency with a clinical picture of pellagra.

Dysentery exists in some cases in such a mild form as not to be mentioned by the patients until questioned. Probably at infrequent intervals there will be several days of loose stools. At times the dysentery may be severe. In one of my cases the patient had not passed a formed stool in two years, but had had from 4 to 15 watery stools daily.

Some patients will complain merely of being "under par." There is a similarity in the symptoms in some cases of amebiasis and certain early cases of tuberculosis. The patient feels vaguely that something is wrong and many will say that "their food does them no good." A vague sense of weakness or uneasiness is sometimes the only symptom.

Time will not permit any detailed account of the pathology exhibited. Suffice it to say that the lesions are found principally in the sigmoid and rectum and vary from almost microscopic ulcers with characteristically undermined edges, to large amebic granulomata resembling carcinoma as recently reported by Gunn and Howard<sup>4</sup>.

It appears that although the actual incidence of amebic infection is almost as great in the temperate and northern climates as in the tropics, either the virulence of the organism is lower or they do not assemble in sufficient numbers in the sigmoid or rectum to cause the usual type of tropical dysentery.

As to treatment it can be said that in probably no other disease can such dramatic and prompt results be obtained as in certain types of amebiasis. There are a number of drugs which have a definite effect on the condition, among which may be named as the most important, ipecac, emetin, emetin-bismuth-iodid, emetin combined with bismuth, stovarsol, and iodo-oxy-quinolin sulphonic acid. Each has its particular advantages and disadvantages and all have their sponsors.

Based on the experience of others I have used as specifics in treatment only emetin hydrochloride and iodo-oxy-quinolin sulphonie acid, the latter, manufactured in this country under the name Anayodin by Ernst Bischoff & Company. My policy is to treat both the acute and chronic forms in general similarly, using either Anayodin alone or a combination of Anayodin by mouth and emetin hypodermically.

The diet should be high protein, low residue with an abundance of milk. In some cases, rest in bed during treatment is indicated. Results are not uniformly good and repeated stool examinations should be made to determine the reappearance of the amebae in the feces.

I wish to state here that my laboratory findings in each case were checked by Dr. Geo. F. Klugh, Atlanta, by wet smears and stained specimens.

#### Case Reports

*Case No. 1:* Mr. D. B. H., a white farmer, aged 62 years, was first seen on June 5, 1930, complaining of "bowel trouble." About two years previously he had begun having diarrhoea with 4 to 15 watery stools every twenty-four hours, which had resisted

all treatment. He stated that during his illness he had not passed a formed stool. He had lost considerable weight, was weak, and from time to time had had periods of low fever. He was poorly nourished, had moderate tenderness over the entire abdomen, and had bilateral inguinal hernias. His stool showed cystic and precystic forms of *endamoeba histolytica*. He was given emetin hydrochloride Gr. 1/2 twice daily for eight days. On the first day of the treatment he passed eight watery stools during the day and two during the night. The number of daily stools decreased rapidly until, at the end of six days of treatment, the patient had one formed stool, the first in two years. Following this treatment the patient was given Anayodin pills orally, three, three times a day for eight days, an intermission of four days and the course repeated.

During the next three months the diarrhoea failed to return but the hernias caused continuous trouble, could not be controlled by truss, and the patient had almost daily fainting attacks from a pinching of the hernial sacs. The situation soon resolved itself into a choice of staying in bed or an operation. The bilateral hernia repair was done under local anesthetic with apparently good results. Six days postoperative the patient began slowly but surely to develop a distension. Five days later he died of peritonitis. An autopsy revealed no trouble at the site of the operation but a small perforation of a large amebic ulcer of the sigmoid.

*Case No. 2:* Mr. C. G., 62 years old, white farmer, was first seen March 26, 1931, obviously in very poor health. Among other symptoms, the patient stated that for the past six years following a stay of two years in the Everglades he had had periods of diarrhoea, intermittent with constipation. He had had mild fever for about three months. At times he had had attacks of severe pain in the umbilical region, ushered in with a chill, followed by diarrhoea, but never by a second chill. For the past three months he had had constant diarrhoea, four to ten watery stools daily. Cysts of *Endameba histolytica* were demonstrated in the stool. He was given the same treatment with prompt relief of his diarrhoea and, in fact, the onset of a most stubborn obstipation, but improvement in his general condition.

Further examination and observation revealed a chronic fibroid pulmonary tuberculosis, inactive, chronic prostatitis, with moderate urethral obstruction, and arteriosclerosis without hypertension. The clinical picture was naturally somewhat confused and treatment was given as seemed indicated. Amebae were not found again in his stool until one year later, March 22, 1932, at which time he was given a second course of Anayodin. At present he is in fair health, with regular bowel movements daily, no fever, and his chief symptoms are referable to his prostatitis. He considers himself greatly improved because of an unexpected increase in his sexual powers. To quote Dr. Earl Floyd of Atlanta, "he mistakes for the dawn of a new day the last spark of the dying embers." It might be noted that in this case the periods of con-



stipation were just as intractable and annoying as the periods of diarrhoea.

Case No. 3: Mr. L. W. G., a white farmer, was first seen on July 20, 1931. About two months previously he had had a laparotomy, followed by a fecal fistula, which showed little evidence of healing. He had had occasional mild attacks of diarrhea during the past few years. Stool examination showed numerous amebic cysts. A course of treatment with Anayodin was followed by a definite improvement of the fecal fistula which soon healed. Examination six months later showed amebic cysts still present in the stool and another course of treatment was given. He has not had another attack of diarrhoea since the first treatment and his general health is improved.

Case No. 4: After the death of Case No. 1 his widow voluntarily asked for a stool examination, although she had never had persistent diarrhoea or fever. She complained of general lassitude and fatigability. The stool showed amebic cysts and she was given a thorough course of treatment with emetin and Anayodin with a definite improvement in her general health.

Case No. 5: Mr. J. N. O., aged 56, white merchant, was seen on April 11, 1932. His illness began apparently about five years ago while living in Miami, Fla. At that time he was given a complete examination by a competent internist with x-ray of the gastro-intestinal tract, urinalysis, blood chemistry, gastric analysis, etc. A diagnosis of pellagra was made and he was put on Brewer's yeast, Hydrochloric Acid, and a nutritious diet. Since that time his condition had remained about the same, although he had had the diagnosis confirmed several times and had followed instructions to the letter. At my first examination I obtained a history of generally impaired health. At times the backs of his hands would break out, especially when in the sun. At times he had had attacks of loose bowels. His appetite was good, but he explained that his food seemed to "do him no good." He felt unusually lazy and tired easily, which was not at all characteristic of him. There was general abdominal soreness, especially in the upper left quadrant. No stomatitis. No constipation.

The physicians who preceded me on the case had done everything but examine the stool, which was the only original thing left for me to do. Numerous cystic and precystic forms of *endamoeba histolytica* were found and he was given the combined treatment of emetin and Anayodin. His health is gradually but definitely improving. Diagnosis in this case must necessarily be pellagra with amebiasis as the etiological factor or amebiasis with a deficiency syndrome as a result of the infection.

Case No. 6: Mrs. J. E. J., a white, 20 year old housewife, living in the Okefenokee swamp, stated that "everything was wrong" and could give no definite or approximate date of the onset of her present illness. About one year ago she had her appendix and right ovary removed in an effort to relieve abdominal pain. She still has abdominal pain, particularly in the upper right quadrant which is almost constant. The summary of her condition is as follows: (1)

Loss of weight (18 pounds in two months); (2) anorexia; (3) fatigability; (4) weakness; (5) leucorrhea; (6) increase in intervals between menstruation; (7) nervousness; (8) frequency of urination; (9) temperature ranging from 99 to 100. (No elevation of afternoon over morning temperature).

Physical and laboratory examination revealed (1) moderately diseased tonsils; (2) dilated pupils; (3) visceroptosis; (4) tenderness over entire right side of abdomen; (5) third degree retroversion of the uterus; (6) hemoglobin 75 per cent; (7) malarial parasites present in blood smear; (8) urine and Wassermann negative; (9) chest negative.

She was put to bed and given a highly nutritious diet, quinine, Ferro-Arsen intravenously, and a tonic. In two weeks she had gained five pounds, but her temperature continued and her symptoms became more varied and did not improve. At this time her stool was examined and revealed enormous numbers of amebic cysts. She was given a course of Anayodin without any untoward results. A few weeks later the existence of an early pregnancy was discovered, adding an unexpected complication, which confuses the clinical picture somewhat. On supportive treatment her weight and hemoglobin have increased.

With her pregnancy and her neurotic and visceroprotic tendencies improvement will of necessity be slow, but I feel that the diagnosis and treatment of her amebiasis will greatly facilitate a cure.

### Summary

1. Amebiasis is more frequent than has heretofore been believed and more frequent examination of the stool will result in more frequent diagnoses of amebiasis.
2. The symptoms may be severe, mild, or absent and are not in proportion to the pathology.
3. Of the cases reported, one died of rupture of an amebic ulcer of the sigmoid.
4. One of the patients reported lives in the Okefenokee swamp, three contracted their illness in south Florida, but two cases had lived all their lives in North Carolina and Georgia. Amebiasis is not restricted to the tropics or semi-tropics, but may be found anywhere.
5. Good results in treatment are obtained from the use of Anayodin (iodo-oxy-quinolin sulphonic acid), either alone or in combination with emetin hydrochloride intramuscularly.

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**THE JOURNAL**

OF THE

**MEDICAL ASSOCIATION OF GEORGIA**

Devoted to Welfare of Medical Association of Georgia

139 Forrest Avenue, N.E., Atlanta, Ga.

APRIL, 1934

## INVITATIONS

*To the members of the Medical Association of Georgia:*

As President of the Richmond County Medical Society it is my pleasure to extend to you an invitation to attend the Eighty-Fifth Annual Session of the Medical Association of Georgia, to be held at Augusta on May 8, 9, 10 and 11, 1934.

The scientific program, under the able chairmanship of Dr. William R. Houston, has been carefully arranged, and will benefit and interest all who attend.

For those seeking relaxation and diversion at that time, there will be horseback riding, tennis and golfing. All of the golf courses will be open to our guests, including the National, better known as the Bobby Jones Course.

It is our hope that a large number will be in attendance, and we extend to the members of the Association throughout the State, a cordial invitation to be with us at that time. We are looking forward with a great deal of pleasure to having you as our guests.

J. RIGHTON ROBERTSON, M.D.,

*President, Richmond County Medical Society.*  
Augusta, Georgia.

*To the Members of the Medical Association of Georgia:*

As a Past-President of the State Association and a resident of the City of Augusta, I am writing to urge all of our members who can do so to come to the convention which meets here in May.

There are many matters in which organized medicine is deeply concerned with regard to which we should be informed, and concerning which your discussion and counsel is needed.

The Richmond County Medical Society has prepared a full program for your entertainment, during such periods as you are not

engaged in the business or scientific sessions. Your friends in the profession, here, are looking eagerly forward to a renewal of the friendly ties and professional association which adds so much to the pleasure of such a meeting.

The Woman's Auxiliary is hopeful that you will bring as many as may be of your wives and daughters, and have arranged to take care of them during their sojourn with us.

Augusta and the Richmond County Medical Society is looking forward with the keenest of pleasurable anticipation to your coming and trust that they may not be disappointed.

Fraternally yours,

EUGENE E. MURPHEY, M.D.

*Ex-President.*

Augusta

March 20, 1934.

*To the Members of the Medical Association of Georgia, and the Woman's Auxiliary to the Medical Association of Georgia:*

It is very pleasing to me, as Past-President of the Medical Association of Georgia, to extend to you a most cordial invitation to come to Augusta, May 8th to 11th. The yearly meeting, this year, promises to be an unusually profitable and enjoyable one.

The local medical profession, and the entire community, are bent on giving you a bully good time. They have succeeded in the past, and will again be successful. Lay all cares and worries aside, you will be better off for the relaxation, and come to Augusta where love, hospitality, and a sincere desire to make your visit an enjoyable one, awaits you.

Looking forward with pleasure to seeing each and every one of you, I am,

Sincerely,

WM. A. MULHERIN, M.D.

*Ex-President.*

Augusta

March 19, 1934.

## THE AUGUSTA MEETING

Once again the medical profession of Augusta, and Augustans, have the privilege and pleasure of welcoming the Medical Association.



tion of Georgia to this city. Convening in Augusta on May 8th, 9th, 10th and 11th, 1934, this will be the Eighty-Fifth Annual Session in the history of this organization. A very cordial invitation is extended to all members and their wives to be present on this occasion.

It is hoped and believed that this will be one of the most successful meetings recorded by the Association. To this end a very interesting scientific program, covering a wide variety of subjects, has been arranged. In addition to this, a number of social events will be given for the entertainment and enjoyment of those present. Outdoor sports, including golf and trap-shooting, will be available to those who enjoy these forms of diversion. In fact, every effort will be put forth to make this an exceedingly profitable and pleasant meeting.

You are urged to be present.

S. J. LEWIS, M.D.,

Augusta, Ga.      Councilor, Tenth District.

*To the Members of the Medical Association of Georgia:*

As the Mayor of the City of Augusta, and representing the City Council and the City of Augusta, I wish to extend a hearty and most cordial invitation to you to attend the Annual Convention of your Association in Augusta, May 8, 9, 10, and 11, 1934.

I feel that many of you already know Augusta well; some of you because it was the place of your student activities and your hospital internship, and many of you have visited Augusta before. To you, I hope that your return will be in the nature of a homecoming. To those of you who have never visited Augusta I promise you, on behalf of our municipal government, our medical profession and our citizens, a sincere and cordial welcome, and assure you that it will be my privilege and my happiness to do everything which lies within my power to make your sojourn among us a pleasant and successful one.

Sincerely and cordially yours,

Augusta      THOMAS BARRETT,  
March 21, 1934.      Mayor.

## A NEW TREATMENT FOR CHOREA

### Case Report

J. A. REDFEARN, M.D.

Albany

On January 2, 1934, I was called to see a well developed, white school girl of twelve, who has always enjoyed a splendid home life, including proper diet and outdoor exercise, such as horseback riding. As I entered the room she sprang out of the bed and ran from the room screaming, declaring that she had seen enough of doctors. Her illness had begun almost four weeks previously, following supposedly a mild influenza. Nervous movements of her hands, arms, legs and head, with grimaces, were constant during waking hours and to some extent while sleeping.

She had the usual diseases of childhood and tonsillitis, otherwise her health has been unusually good. Dr. W. P. Rhyne suggested a study of her stool to rule out intestinal parasites, since most cases of chorea he had observed had been positive. He reported negative findings.

The treatment followed was published in the International Medical Digest, October, 1933, and copied from the British Medical Journal, published in June of the same year under the title, "A Treatment of Sydenham's Chorea,"—Bateman, Donald.

Triple typhoid vaccine was given as follows:

January 2, 1934: 0.2 of 1 cc triple typhoid was given intravenously. (Each cc contained 500 million typhoid bacilli and 250 million each paratyphoid, A and B. The patient was then put in blanket bed with hot water bottles and cared for by a trained nurse. Within an hour there was chilliness, nausea and slight vomiting. Her rectal temperature reached 105.2 within three hours and remained there for more than two hours and above 104 for four hours, followed by a gradual fall to 100.8 at 7:30 P.M. She slept well during the night, showing less choreic movements. .25 cc. was given at 8:30 A.M. the following day when the temperature was 100.2. It produced a temperature of 105.8 at 10:00 o'clock and gradually returned to 103 at 1:00 P.M., but remained above 100 all night. She slept well and showed continued improvement. The third day 0.3 cc was given with about the same effect as the previous day, with marked cessation of choreic movements. In fact, she appeared practically normal, but 0.2 cc was administered the fourth day, which caused a temperature of 104 for about two hours, and gradually returned to 100 in the afternoon. All choreic movements had ceased on the fifth day. She was kept in bed for a week without any return of symptoms. Her appetite improved, she slept well and was permitted to receive visitors without upsetting her. Benefits derived come from pyrexia not to exceed 106° F. per rectum. If it does remove the patient from the blanket bed and place between

sheets and administer anti-pyretics if necessary. Each day the doses are increased and it may be necessary to double it to bring the temperature to 105° or above. A tuberculin syringe is desirable to insure accuracy.

On February 2, her tonsils were removed under ether anesthesia. Convalescence was normal and she returned to school two weeks later and has led a normal life since. She has apparently fully recovered.

#### *Conclusions*

It takes from two to six months for a child to recover from chorea under the standard treatment. The pyrexia treatment, when effective, gives relief promptly from such disturbing symptoms and apparently cures within a week. This is my reason for reporting the case.

### BENIGN TUMOR OF THE LARYNGOPHARYNX

#### *Report of Case*

B. MCH. CLINE, M.D.

*Atlanta*

A man, aged 56, was first seen by me in December, 1933. He complained of difficulty in swallowing, loss of weight, and inability to breathe when lying down. These symptoms had first appeared ten years before and had grown progressively worse.

The laryngoscope revealed a mass about the size of a bantam egg arising from the left arytenoid. It was reddened, glistening and pedunculated. Evidently his orthopnea was due to the tumor falling back over the glottis and producing obstruction when he was recumbent. Biopsy was done on December 19 and the specimen pronounced non-malignant. Ten days later he was admitted to the hospital and a tracheotomy was performed under local anesthesia. Then, under general anesthesia, with the use of the Lynch suspension apparatus, the mass was removed with a loop of wire.

Dr. Bishop made a number of sections from the tumor and pronounced it a radio-resistant fibroma. He expressed the opinion that, if it had been totally removed, no further trouble would have occurred. By March 10, 1934, the patient had already gained 12 pounds. He said, "My appetite is good, almost too good. I am troubled no longer by the strangling spells, and I no longer make the terrible noise when I sleep."

*Comment:* This patient should have had a thorough examination of the larynx at the time his symptoms began, but in spite of seeing several physicians and of having a number of x-rays, no one had looked at it. In a properly equipped bronchoscopic clinic, it would have been possible to remove the tumor with a snare under local anesthesia by means of the Jackson laryngoscope at the time of the first examination. A frozen section would have established that the tumor was not malignant, and the patient could have enjoyed

Christmas at home with the realization that he was cured. Such facilities were not available in Atlanta, and it was therefore necessary to submit him to the inconvenience and inordinate risk of tracheotomy, and to give him a general anesthetic. We did not have the special instruments for intralaryngeal work which were indicated in this particular case, but the tumor was removed as best we could and the patient was kept in the hospital a week.

My purpose in reporting this case is to bring to your attention the urgent need for a properly equipped bronchoscopic clinic in Atlanta to serve not only Fulton County, but the whole Southeast. Such a clinic requires a wealth of special instruments. The particular snare needed in this case had not been needed in any case I had seen in my previous experience since 1918. Such a clinic needs a room devoted to this purpose alone, always in readiness for whatever emergency may arise. Such a clinic demands a nurse especially trained in the care of bronchoscopic instruments. It is also necessary to have a team of trained assistants, so that all work may be done under local anesthesia. Not only is local anesthesia safer for the very ill patient, but it also permits the treatment of ambulatory patients who should constitute 90 per cent of those needing treatment.

### SUMMARY OF PROCEEDINGS OF THE HOUSE OF DELEGATES, EIGHTY-FOURTH ANNUAL SESSION, MEDICAL ASSOCIATION OF GEORGIA

MAY 9-12, 1933

MACON, GEORGIA

*Tuesday, May 9, 1933*

1. Reports of officers and committees, July, 1933, JOURNAL, page 239.

2. Adopted resolution requesting the Board of Regents to reconsider its proposal to abolish the Medical Department of the University of Georgia. This resolution was immediately forwarded to the Board of Regents and it subsequently reconsidered its action.

3. Dr. J. A. Redfearn, Albany, gave notice of proposed amendments to the Constitution and By-Laws, Article IX, Section 3; Chapter VI, Section 2; in which it is proposed to change the time for the election of officers and to limit the scientific meetings of each annual session to two days instead of the present three day session. Action on the proposed changes will be in order at the 1934 session.

4. Adopted resolution thanking the Georgia Public Health Association for its pledge of co-operation with the county societies and Medical Association of Georgia in all public health work.

5. Selected list of names to be presented to the Governor from which list appointments were made to the new State Board of Health. (June, 1933, JOURNAL, page 212).



*Tuesday Evening, May 9, 1933*

1. Adopted changes in Constitution and By-Laws, June, 1933, JOURNAL, page 207, to permit in addition to regular and honorary members, associate and intern members.

2. Received recommendation from the Reference Committee proposing an amendment to the Constitution and By-Laws; that Article IX, Section 4, be amended by adding to it the following: "The members of the State Board of Health shall be nominated by their respective district societies at the annual meeting of such societies preceding the annual session of this Association, and in failure of nomination by district societies, they be nominated by the delegates present from each of the district societies, all of which shall be ratified by this Association.

3. Adopted resolution giving the Georgia Pediatric Society authority to carry out infant mortality work.

*Friday Morning, May 12, 1933*

1. Adopted report of the Committee appointed to select a name to be engraved on the Doctor L. G. Hardman Silver Loving Cup.

2. Adopted the report of the Auditing Committee: "The Auditing Committee audited the books of the Secretary-Treasurer and found them correct and called attention to the fact that both the Secretary-Treasurer and Executive Secretary are bonded."

3. Adopted the report of the Council recommending that the dues for the calendar year 1934 be reduced to six dollars.

4. Gave a rising vote of thanks to the Woman's Auxiliary for its helpful co-operation.

5. Adopted resolution creating a Committee on Medical Economics and Public Relations. (June, 1933, JOURNAL, page 211).

6. Appointed the following committee to co-operate with the Chamber of Commerce of Jefferson, Georgia, to erect a bronze statue of Dr. Crawford W. Long at Jefferson:

Dr. Garnett Quillian, Atlanta, Chairman.  
Dr. J. C. Bennett, Jefferson.  
Dr. S. T. R. Revell, Louisville.  
Dr. Wm. H. Myers, Savannah.  
Dr. C. W. Crane, Augusta.

\*Abstract. For stenographic report of General Session, see June, 1933, Journal, pages 199 to 213; and July, 1933, Journal, pages 239 to 250.

The Philadelphia Academy of Surgery announces that essays will be received in competition for the Samuel D. Gross Prize of \$1,500.00 until January 1, 1935. The conditions annexed by the testator are that the prize "shall be awarded every five years to the writer of the best original essay, not exceeding 150 printed pages, octavo, in length, illustrative of some subject in surgical pathology or surgical practice founded upon original investigations, the candidates for the prize to be American citizens."

## PROGRAM MEDICAL ASSOCIATION OF GEORGIA

Eighty-Fifth Annual Session

*Augusta*

HOTEL RICHMOND, HEADQUARTERS

May 8, 9, 10, 11, 1934

### *Officers*

President—Chas. H. Richardson, Macon.  
President-Elect—Clarence L. Ayers, Toccoa.  
First Vice-President—Jos. D. Applewhite, Macon.  
Second Vice-President—W. W. Turner, Nashville.  
Secretary-Treasurer—Allen H. Bunce, Atlanta.  
Parliamentarian—John W. Simmons, Brunswick.

### *Delegates to the A. M. A.*

William H. Myers (1933-4).....Savannah  
Alternate—William A. Mulherin.....Augusta  
C. W. Roberts (1933-4).....Atlanta  
Alternate—Marion C. Pruitt.....Atlanta  
Olin H. Weaver (1934-5).....Macon  
Alternate—C. K. Sharp.....Arlington

### RICHMOND COUNTY MEDICAL SOCIETY

#### *Officers*

President—J. Righton Robertson, Augusta.  
Vice-President—John H. Sherman, Augusta.  
Secretary-Treasurer—R. C. McGahee, Augusta.  
Delegate—Geo. A. Traylor, Augusta.  
Alternate—Wm. J. Cranston, Augusta.  
Delegate—Albert A. Davidson, Augusta.  
Alternate—W. W. Battey, Augusta.

### COMMITTEES

Geo. A. Traylor, Augusta, *General Chairman*

### *Arrangements*

Wm. A. Mulherin, Augusta, Chairman.  
W. H. Goodrich, Augusta.  
Wm. R. Houston, Augusta.  
A. J. Kilpatrick, Augusta.  
S. J. Lewis, Augusta.  
Eugene E. Murphey, Augusta.  
Hugh N. Page, Augusta.  
V. P. Sydenstricker, Augusta.  
E. A. Wilcox, Augusta.

### *Entertainment*

L. P. Holmes, Augusta, Chairman.  
Henry M. Michel, Augusta.  
King W. Milligan, Augusta.  
Chas. D. Ward, Augusta.

### *Golf*

F. Lansing Lee, Augusta, Chairman.  
F. X. Mulherin, Augusta.  
Robt. L. Rhodes, Augusta  
Richard B. Weeks, Augusta.

### *Transportation*

Wm. J. Cranston, Augusta, Chairman.

Henry P. Harrell, Augusta.  
Peter B. Wright, Augusta.

*Joint Committee with Woman's Auxiliary*

G. T. Bernard, Augusta, Chairman.  
Geo. W. Wright, Augusta.  
Irvine Phinizy, Augusta.

*Finance*

J. Harvey Butler, Augusta, Chairman.  
W. Whatley Battey, Augusta.  
Jno. W. Brittingham, Augusta.  
J. Dewey Gray, Augusta.

*Reception*

Jas. M. Hull, Augusta, Chairman.  
Chas. I. Bryans, Augusta.  
Ralph H. Chaney, Augusta.  
J. Righton Robertson, Augusta.  
Jno. H. Sherman, Augusta.  
J. Wm. Thurmond, Augusta.

**COUNCIL**

Chairman.....	J. A. Redfearn, Albany
Clerk.....	Grady N. Coker, Canton
Secretary.....	Allen H. Bunce, Atlanta
First District (1936).....	C. Thompson, Millen
Vice-Councilor.....	Jas. C. Metts, Savannah
Second District (1936).....	J. A. Redfearn, Albany
Vice-Councilor.....	Chas. H. Watt, Thomasville
Third District (1936).....	J. C. Patterson, Cuthbert
For old 12th District (1935).....	J. Cox Wall, Eastman
Vice-Councilor.....	J. Cox Wall, Eastman
Fourth District (1936).....	Kenneth S. Hunt, Griffin
Vice-Councilor.....	Enoch Callaway, LaGrange
Fifth District (1934).....	W. A. Selman, Atlanta
Vice-Councilor.....	Marion C. Pruitt, Atlanta
Sixth District (1934).....	H. G. Weaver, Macon
Vice-Councilor.....	H. D. Allen, Milledgeville
Seventh District (1934).....	M. M. McCord, Rome
Vice-Councilor.....	W. H. Perkinson, Marietta
Eighth District (1934).....	J. E. Penland, Waycross
Vice-Councilor.....	K. McCullough, Waycross
Ninth District (1935).....	Grady N. Coker, Canton
Vice-Councilor.....	J. K. Burns, Gainesville
Tenth District (1935).....	S. J. Lewis, Augusta
For old 8th District (1934).....	H. M. Fullilove, Athens
Vice-Councilor (1934).....	M. A. Hubert, Athens

**COMMITTEES**

*Scientific Work*

William R. Houston, Chairman (1934).....Augusta  
Joseph Yampolsky (1935).....Atlanta  
S. T. R. Revell (1936).....Louisville  
Allen H. Bunce, Secretary-Treasurer.....Atlanta

*Public Policy and Legislation*

Dan Y. Sage, Chairman (1934).....Atlanta  
Grady N. Coker (1935).....Canton  
A. R. Rozar (1936).....Macon  
Allen H. Bunce, Secretary-Treasurer.....Atlanta

T. F. Abercrombie, Director, Department of  
Public Health, State of Georgia.....Atlanta

*Medical Defense*

Frank K. Boland, Chairman (1938).....Atlanta  
Wm. A. Mulherin (1934).....Augusta  
J. O. Elrod (1936).....Forsyth  
J. A. Redfearn, Chairman of Council.....Albany  
Allen H. Bunce, Secretary-Treasurer.....Atlanta

*Hospitals*

R. H. Oppenheimer, Chairman (1937).....Atlanta  
K. McCullough (1934).....Waycross  
Geo. F. Klugh (1935).....Atlanta  
Arthur D. Little (1936).....Thomasville  
D. Henry Poer (1938).....Atlanta

*Abner Wellborn Calhoun Lectureship*

Jas. E. Paullin, Chairman (1938).....Atlanta  
H. I. Reynolds (1934).....Athens  
Eugene E. Murphey (1935).....Augusta  
Craig Barrow (1936).....Savannah  
Frank K. Boland (1937).....Atlanta

*Economics and Public Relations*

R. M. Harbin, Chairman (1934).....Rome  
Wm. A. Mulherin (1935).....Augusta  
C. L. Ridley (1936).....Macon  
Dan Y. Sage (1937).....Atlanta  
C. W. Roberts (1938).....Atlanta  
Mrs. J. Bonar White, President, Woman's  
Auxiliary, Ex-Officio.....Atlanta

*Necrology*

A. J. Mooney, Chairman.....Statesboro  
T. J. McArthur.....Cordele  
G. Y. Moore (Deceased).....Cuthbert

*Medical History of Georgia*

Frank K. Boland, Chairman (1937).....Atlanta  
William R. Dancy.....Savannah  
Arthur G. Fort.....Atlanta

*Crawford W. Long Memorial Prize*

William R. Dancy, Chairman.....Savannah  
Stewart R. Roberts.....Atlanta  
V. P. Sydenstricker.....Augusta  
George Bachmann.....Atlanta  
Edgar R. Pund.....Augusta

*Cancer Commission*

J. L. Campbell, Chairman.....Atlanta  
William H. Myers.....Savannah  
Chas. H. Watt.....Thomasville  
J. Cox Wall.....Eastman  
Emory R. Park.....LaGrange  
Chas. C. Harrold.....Macon  
R. M. Harbin.....Rome  
Albert F. Saunders.....Valdosta  
Grady N. Coker.....Canton  
G. T. Bernard.....Augusta

*Advisory Committee—Woman's Auxiliary*

B. H. Minchew, Chairman.....Waycross  
Jas. N. Brawner.....Atlanta  
Ralston Lattimore.....Savannah  
Jas. L. King.....Macon  
Chas. A. Greer.....Oglethorpe



*Fraternal Delegate to the Georgia  
Pharmaceutical Association*

C. L. Ridley.....Macon

*Fraternal Delegate from the Georgia  
Pharmaceutical Association*

R. L. Olive, D.D.S.....Augusta

*Fraternal Delegate to the Georgia Dental  
Association*

C. Hall Farmer.....Macon

*Fraternal Delegates to Other State Meetings*

To visit Alabama: F. B. Blackmar, Columbus; O. W. Roberts, Carrollton.

To visit Florida: Arthur G. Fort, Atlanta; J. M. Smith, Valdosta.

To visit North Carolina: C. W. Roberts, Atlanta; D. D. Walker, Macon.

To visit South Carolina: Thos. M. Adams, Montezuma; Robt. L. Rhodes, Augusta.

To visit Tennessee: W. W. Chrisman, Macon; H. L. Erwin, Dalton.

*Committee for Study of Maternal Mortality  
and Infant Deaths  
First District*

Guy G. Lunsford.....Millen

A. J. Waring.....Savannah

*Second District*

I. M. Lucas.....Albany

S. L. Cheshire.....Thomasville

*Third District*

Carl P. Savage.....Montezuma

J. C. Patterson.....Cuthbert

*Fourth District*

Thos. S. Bailey.....Newnan

S. C. Rutland.....LaGrange

*Fifth District*

J. R. McCord.....Atlanta

M. Hines Roberts.....Atlanta

*Sixth District*

Edward B. Claxton.....Dublin

J. D. Applewhite.....Macon

*Seventh District*

P. O. Chaudron.....Cedartown

J. E. Lester.....Marietta

*Eighth District*

John W. Simmons.....Brunswick

G. T. Crozier.....Valdosta

*Ninth District*

M. B. Allen.....Hoschton

D. H. Garrison.....Tate

*Tenth District*

S. S. Smith.....Athens

Wm. A. Mulherin.....Augusta

*Ex-Officio*

T. F. Abercrombie, Director, Department of  
Public Health for Georgia.....Atlanta

*L. G. Hardman Silver Loving Cup*

W. A. Selman, Chairman.....Atlanta

Wm. A. Mulherin.....Augusta

Chas. H. Watt.....Thomasville

William H. Myers.....Savannah

Chas. C. Harrold.....Macon

Allen H. Bunce.....Atlanta

*Crawford W. Long Bronze Statue to Cooperate with  
Chamber of Commerce, Jefferson, Georgia*

Garnett Quillian, Chairman.....Atlanta

J. C. Bennett.....Jefferson

S. T. R. Revell.....Louisville

Wm. H. Myers.....Savannah

Chas. W. Crane.....Augusta

*Members of the State Board of Health Nominated  
by the Medical Association of Georgia*

First District—Cleveland Thompson, Millen Sept.  
1, 1939.

Second District—C. K. Sharp, Arlington, Sept. 1,  
1939.

Third District—Mr. R. C. Ellis, Americus, Sept. 1,  
1936.

Fourth District—Marvin M. Head, Zebulon, Sept. 1,  
1937.

Fifth District—Mr. Robert F. Maddox, Atlanta, Sept.  
1, 1936.

Sixth District—A. R. Rozar, Macon, Sept. 1, 1938.

Seventh District—M. M. McCord, Rome, Sept. 1,  
1938.

Eighth District—Henry W. Clements, Adel, Sept. 1,  
1938.

Ninth District—L. C. Allen, Hoschton, Sept. 1, 1939.

Tenth District—Wm. A. Mulherin, Augusta, Sept.  
1, 1937.

*DELEGATES TO THE 1934 SESSION\**

Baldwin.....

Bartow.....T. Lowry, Cartersville

Ben Hill.....

Bibb.....Chas. C. Harrold, Macon

J. D. Applewhite, Macon

Blue Ridge.....

Brooks.....

Bullock-Candler-Evans.....A. J. Mooney, Statesboro

Burke.....R. L. Miller, Waynesboro

Butts.....

Campbell.....

Carroll.....T. M. Spruell, Temple

Chatham.....G. H. Lang, Savannah

R. V. Martin, Savannah

Chattooga.....

Cherokee.....

Clarke.....Paul L. Holliday, Athens

Clayton-Fayette.....

Cobb.....W. Mayes Gober, Marietta

Coffee.....

Colquit.....

Coweta.....

Crisp.....L. O. Wooten, Cordele

Decatur-Seminole.....R. F. Wheat, Bainbridge

DeKalb.....

Dooly.....

Dougherty	-----	Telfair	-----	C. J. Maloy, Helena
Douglas	-----	Terrell	-----	W. P. Durham, Sasser
Elbert	-----	Thomas	-----	C. H. Watt, Thomasville
Emanuel	-----	Tift	-----	
Floyd	-----	Toombs	-----	
Forsyth	-----	Tri- (Calhoun, Early, Miller)	-----	J. G. Standifer, Blakely
Franklin	-----	Tri- (Liberty, Long, McIntosh)	-----	
Fulton	-----	Troup	-----	E. C. Herman, LaGrange
		Turner	-----	H. M. Belflower, Sycamore
		Upson	-----	
		Walker	-----	A. H. Hinton, Rossville
		Walton	-----	J. A. Pirkle, Monroe
		Ware	-----	W. F. Reavis, Waycross
		Warren	-----	
Glynn	-----	Washington	-----	N. J. Newsom, Sandersville
Gordon	-----	Wayne	-----	
Grady	-----	Whitfield	-----	J. C. Rollins, Dalton
Greene	-----	Wilcox	-----	
Gwinnett	-----	Wilkes	-----	
Habersham	-----	Worth	-----	
Hall	-----			
Hancock	-----			
Hart	-----			
Henry	-----			
Houston-Peach	-----			
Jackson-Barrow	-----			
Jasper	-----			
Jefferson	-----			
Jenkins	-----			
Johnson	-----			
Jones	-----			
Lamar	-----			
Laurens	-----			
Lowndes	-----			
Macon	-----			
Madison	-----			
Meriwether	-----			
Mitchell	-----			
Monroe	-----			
Montgomery	-----			
Morgan	-----			
Muscogee	-----			
Newton	-----			
Ocmulgee-Bleckley, Dodge, Pulaski	-----			
Polk	-----			
Putnam	-----			
Rabun	-----			
Randolph	-----			
Richmond	-----			
Screven	-----			
Spalding	-----			
Stephens	-----			
Stewart-Webster	-----			
Sumter	-----			
Talbot	-----			
Taliaferro	-----			
Tattnall	-----			
Taylor	-----			

\*This list includes the names of all delegates which have been reported to the Secretary-Treasurer.

#### ANNOUNCEMENTS

Meetings will be held in the Ball Room, Hotel Richmond.

Be sure to go to the Registration Desk, present your 1934 card and procure a badge immediately on your arrival.

Discussion of papers is open to all members and guests of the Association. It is not limited to those named on the program.

On arising to discuss a paper the speaker will please announce his name and address clearly for the benefit of the Association and stenographer.

Meetings will be called to order at the hour fixed on the program. It is especially desired that the members be prompt in their attendance.

All manuscript should be typewritten, double spaced and on one side of the paper only. Papers must be handed to the Secretary immediately after being read.

#### IMPORTANT NOTICE!

Delegates must present written credentials to the Committee on Credentials from the House of Delegates to secure Delegates' Badges.

Members may not take part in the proceedings until they have registered and procured official badges.

#### PUBLIC MEETINGS

WEDNESDAY, MAY 10, 9:00 A.M.

*Opening Meeting*

BALL ROOM, MEZZANINE FLOOR

HOTEL RICHMOND

WEDNESDAY, MAY 9, 8:30 P.M.

Presentation of the "Badge of Service" to the President, Charles H. Richardson, Macon, by S. T. R. Revell, Louisville.



### A DISCUSSION OF THE DIAGNOSIS OF OBSCURE FEVER

Louis Hamman

Associate Professor of Clinical Medicine, Johns Hopkins University School of Medicine, Baltimore, Maryland.

Introduction by Wm. R. Houston, Augusta.

### THE PRESENT STATUS OF GASTRIC SURGERY

Waltman Walters

Associate Professor of Surgery of the University of Minnesota Medical School, Minneapolis, Minnesota.

Introduction by Chas. H. Richardson, Macon.

THURSDAY, MAY 10, 12:00 NOON

*President's Address*

The President's Address will be at an open session to which the public and visitors are invited.

### MEMORIAL EXERCISES

A. J. Mooney, Statesboro

Chairman, Committee on Necrology

### ENTERTAINMENTS

TUESDAY, MAY 8, 10:00 TO 12:00 P.M.

Informal reception and dance, Winter Garden, Hotel Richmond.

WEDNESDAY, MAY 9, 7:00 P.M.

Annual dinner of the alumni of Emory University School of Medicine, Hotel Richmond. G. Lombard Kelly, Sponsor.

Annual dinner of the alumni of the University of Georgia Medical Department, Hotel Richmond. Robert B. Crichton, Sponsor.

Annual dinner of the Georgia Pediatric Society, Hotel Richmond, Joseph Yampolsky, President.

WEDNESDAY, MAY 9, 10:00 TO 12:00 P.M.

Dance—Winter Garden, Hotel Richmond.

THURSDAY, MAY 10, 3:00 TO 6:00 P.M.

Golf Tournament, Country Club.

THURSDAY, MAY 10, 8:00 P.M.

Banquet—Hotel Richmond.

10:00 P.M. TO 1:00 A.M.

Reception and dance, Country Club.

### MEETING OF THE COUNCIL

The first meeting of the Council will be held in the Ball Room of Hotel Richmond, Tuesday, May 8th at 6:00 P.M. Each Councilor will render a written report on conditions in each county in his district. Other meetings of the Council will be held at the call of the Chairman in the Pink Room, Hotel Richmond.

### OFFICIAL REPORTER

The Master Reporting Company.....New York City

### MEETING OF THE HOUSE OF DELEGATES

*Ball Room, Hotel Richmond*

TUESDAY, MAY 8, 2:30 P.M.

First meeting of the House of Delegates.

1. Call to order by the President.
2. Roll call.
3. Appointment of Reference Committee.
4. Report of officers:
  - President.
  - President-Elect.
  - Vice-Presidents.
  - Parliamentarian.
  - Secretary-Treasurer.
5. Report of Council by the Chairman.
6. Reports of committees:
  - a. Scientific Work.
  - b. Public Policy and Legislation.
  - c. Arrangements.
  - d. Medical Defense.
  - e. Hospitals.
  - f. Necrology.
  - g. Cancer Commission.
  - h. History.
  - i. Abner Wellborn Calhoun Lectureship.
  - j. Crawford W. Long Memorial Prize.
  - k. Advisory Committee—Woman's Auxiliary.
  - l. L. G. Hardman Loving Cup.
  - m. Study of Maternal Mortality and Infant Deaths.
  - n. Special Committees.
7. Report of Delegates to the A. M. A.
8. Report of Fraternal Delegates.
9. Unfinished Business.
10. New Business.

FRIDAY, MAY 11, 8:30 A.M.

*Ball Room, Hotel Richmond*

Second meeting of the House of Delegates.

1. Call to order by the President.
2. Reading of minutes.
3. Reports of Committees.
4. Unfinished Business.
5. New Business.

### PROGRAM

The papers for each meeting must be read as scheduled on the program.

WEDNESDAY, MAY 9, 1934

*Ball Room, Mazzanine Floor, Hotel Richmond*

9:00 A.M.

Call to order by the President, Chas. H. Richardson, Macon.

### INVOCATION

WEDNESDAY, MAY 9, 9:00 A.M.

*Scientific Papers*

1. Typhus Fever in Georgia.  
Mark S. Dougherty, Jr., Atlanta.  
To lead the discussion:  
W. E. Simmons, Metter.

2. Medical Economics as Applied to Patients of the Low Income Group.

Lewis M. Gaines, Atlanta.

To lead the discussion:

C. W. Strickler, Atlanta.

3. Alkaptonuria (Five Minutes).

L. F. Lanier, Sylvania.

4. Tachycardia.

Stewart R. Roberts, Atlanta.

To lead the discussion:

R. H. Oppenheimer, Emory University.

5. Irritable Colon.

J. D. Gray, Augusta.

To lead the discussion:

Jas. E. Paullin, Atlanta.

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*Abner Wellborn Calhoun Lecture*

#### ENDOCRINE ASPECTS GYNECOLOGY

Emil Novak

Associate Professor of Obstetrics, University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore, Maryland.

Introduction by Jas. E. Paullin, Atlanta.

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WEDNESDAY, MAY 9, 2:30 P.M.

*Ball Room, Hotel Richmond*

1. Some General Considerations in Treating the Accessory Sinuses of the Nose.  
G. H. Lang, Savannah.  
To lead the discussion:  
C. I. Bryans, Augusta.
2. Fatal Reaction in Artificial Pneumothorax (Five Minutes).  
J. C. Masee, Atlanta.
3. Hypothyroidism.  
E. F. Wahl, Thomasville.  
To lead the discussion:  
V. E. Powell, Atlanta.
4. Nephrosis in Childhood.  
A. J. Waring, Savannah.  
To lead the discussion:  
R. C. McGahee, Augusta.
5. Foci of Infection in Allergic Reactions of Children—Their Relative Unimportance.  
F. L. Bivings, Atlanta.  
To lead the discussion:  
Hal M. Davison, Atlanta.
6. Scarlet Fever and its Complications.  
C. P. Savage, Montezuma.  
To lead the discussion:  
Wm. A. Mulherin, Augusta.

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WEDNESDAY, MAY 9, 8:30 P.M.

*Ball Room, Hotel Richmond*

Presentation of the "Badge of Service" to the President, Charles H. Richardson, Macon, by S. T. R. Revell, Louisville.

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#### A DISCUSSION OF THE DIAGNOSIS OF OBSCURE FEVER

Louis Hamman

Associate Professor of Clinical Medicine, Johns Hop-

kins University School of Medicine, Baltimore, Maryland.

Introduction by Wm. R. Houston, Augusta.

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#### THE PRESENT STATUS OF GASTRIC SURGERY

Waltman Walters

Associate Professor of Surgery of the University of Minnesota Medical School, Minneapolis, Minnesota.

Introduction by Chas. H. Richardson, Macon.

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THURSDAY, MAY 10, 9:00 A.M.

*Ball Room, Hotel Richmond*

1. Uterine Hemorrhage.  
L. C. Allen, Hoschton.  
To lead the discussion:  
J. W. Landham, Atlanta.
2. Acute Gangrenous Cholecystitis.  
C. H. Watt, Thomasville.
3. Indication for Surgery in Gallbladder Disease—  
With a Review of Eighty-Four Consecutive  
Operative Cases.  
Lon Grove, Atlanta.  
Joseph C. Read, Atlanta.  
To lead the discussion on Nos. 2-3:  
Kenneth Bell, Atlanta.  
A. D. Little, Thomasville.  
Kenneth McCullough, Waycross.
4. Carcinoma of Abdominal Testis (Five Minutes).  
Lester Harbin, Rome.
5. Preventability of Cancer.  
G. T. Bernard, Augusta.  
To lead the discussion:  
Edgar R. Pund, Augusta.
6. Treatment of Common Fractures.  
H. M. Michel, Augusta.  
P. B. Wright, Augusta.  
To lead the discussion:  
Lawson Thornton, Atlanta.

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THURSDAY, MAY 10, NOON

*Ball Room, Hotel Richmond*

*President's Address*

Charles H. Richardson, Macon.

President, Medical Association of Georgia

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#### MEMORIAL EXERCISES

A. J. Mooney, Statesboro,

Chairman, Committee on Necrology

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THURSDAY, MAY 10, 2:30 P.M.

*Ball Room, Hotel Richmond*

1. Considerations Concerning Acute Abdominal Pain  
S. C. Ketchin, Louisville.  
To lead the discussion:  
C. W. Crane, Augusta.
2. Principles Underlying Repair of Double Harelip.  
F. C. Lee, Augusta.  
To lead the discussion:  
E. A. Wilcox, Augusta.



3. Treatment of Bone Sarcoma (Giant Cell Type) with X-Radiation—Lantern Slides (Five Minutes).

James J. Clark, Atlanta.

4. Progressive Muscular Dystrophy.

J. H. Kite, Decatur.

To lead the discussion:

Wm. A. Smith, Atlanta.

5. Cancer of the Bladder.

Montague L. Boyd, Atlanta.

To lead the discussion:

Chas. C. Harrold, Macon.

6. Bilateral Renal and Ureteral Calculi.

S. A. Kirkland, Atlanta.

To lead the discussion:

W. L. Champion, Atlanta.

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FRIDAY, MAY 11, 9:00 A.M.

Ball Room, Hotel Richmond

1. Care of the Normal Obstetrical Patient.  
O. R. Thompson, Macon.  
To lead the discussion:  
A. J. Kilpatrick, Augusta.
2. Menstrual Disorders with Special Reference to the Functional Types.  
B. T. Beasley, Atlanta.  
To lead the discussion:  
G. Lombard Kelly, Augusta.
3. Operations Upon the Thyroid Gland in Atlanta During the Last Five Years.  
Ben H. Clifton, Atlanta.  
To lead the discussion:  
C. W. Roberts, Atlanta.
4. Some Clinical Observations in the Treatment of Eczema.  
Howard Hailey, Atlanta.  
To lead the discussion:  
J. M. Sigman, Macon.
5. The Eyes as Related to Sinusitis.  
J. Allen Smith, Macon.  
To lead the discussion:  
W. R. Bedingfield, Augusta.

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FRIDAY, MAY 11, NOON

Ball Room, Hotel Richmond

#### ELECTION OF OFFICERS

President-Elect.

First Vice-President

Second Vice-President.

Two delegates to the A. M. A.

Two alternate delegates to the A. M. A.

Councilors for the Fifth, Sixth, Seventh and Eighth Districts.

Selection of meeting place for 1935.

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#### CONSTITUTION AND BY-LAWS

Chapter II. Section 2. No papers or addresses before the Association, except those of the President and invited essayists, shall occupy more than fifteen minutes in their delivery; and no member shall speak

longer than five minutes, nor more than once on any subject, provided that each essayist shall have five minutes in which to close the discussion of his paper.

Chapter VIII. Section I. The deliberations of this Association shall be governed by parliamentary usage as contained in Roberts' Rules of Order, when not in conflict with this Constitution and By-Laws.

Chapter VIII. Section 2. All papers read before the Association shall become its property. Each paper shall be deposited with the Secretary when read, and if this is not done, it shall not be published.

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No miscellaneous or business matters will be discussed before the scientific sessions, but will be referred to the House of Delegates.

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#### Resolution Adopted 1921

Resolved. That a member who sends in a title of a paper to be placed on the program and is not present to read the paper shall pay the penalty of not having an opportunity to appear on the program for two years, unless he presents an excuse acceptable to the Committee on Scientific Work.

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We are instructed by the President to announce to all essayists that the session of the Scientific Program of the Association will begin on time, and that the above regulations of the By-Laws in reference to the program will be strictly enforced.

WILLIAM R. HOUSTON, *Chairman*,

JOSEPH YAMPOLSKY,

S. T. R. REVELL,

ALLEN H. BUNCE, *Secretary-Treasurer*,  
*Committee on Scientific Work.*

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#### IN MEMORIAM\*

Adkins, William Nevin, Atlanta, January 6, 1934, aged 50.

Akridge, Henry Alonzoe, Brunswick, December 17, 1933, aged 43.

Alston, N. Charles, Richland, December 31, 1933, aged 78.

Baker, Elliott J., Jr., Columbus, December 4, 1933, aged 33.

Bennett, Jesse C., Jefferson, April 19, 1934, aged 65.

Benson, Norman E., Albany, July 4, 1933, aged 57.

Bush, Arthur Dermont, Decatur, September 6, 1933, aged 57.

Carson, Charles Calhoun, Talbotton, October 5, 1933, aged 47.

Childs, John Nathaniel, Ideal, December 29, 1933, aged 73.

Crittenden, Albert LeRoy, Shellman, January 25, 1934, aged 54.

Cromer, James Dawkins, Atlanta, August 31, 1933, aged 65.

Floyd, William B., Rome, January 18, 1934, aged 65.

Greene, William J., Ringgold, January 8, 1934, aged 63.

Hall, Charles Edward, Atlanta, October 22, 1933, aged 68.  
 Holliday, Paul Lovejoy, Athens, April 22, 1934, aged 41.  
 Houseworth, Delvours, Douglasville, April 18, 1934, aged 63.  
 Ingram, H. R., Coleman, April 29, 1933, aged 61.  
 Jennings, Emmaus M., Menlo, June 17, 1934, aged 64.  
 Jones, Willis B., Atlanta, March 3, 1934, aged 59.  
 Kea, Thomas Byron, Adrian, December 5, 1933, aged 54.  
 Kellogg, William Crissey, Augusta, February 13, 1934, aged 59.  
 McClure, George C., Ball Ground, October 19, 1933, aged 63.  
 McClure, James Henry, Cornelia, December 7, 1933, aged 69.  
 Meadows, Carlos Brown, Valdosta, December 8, 1933, aged 61.  
 Moore, George Young, Cuthbert, December 24, 1933, aged 65.  
 Oertel, Theodore Eugene, Augusta, June 28, 1933, aged 69.  
 Ogden, Daniel Holland, Odum, May 1, 1933, aged 65.  
 Parks, Frank W., Brinson, December 16, 1933, aged 50.  
 Reid, Robert Stephen, Savannah, January 4, 1934, aged 62.  
 Shaw, Henry William, Augusta, October 27, 1933, aged 51.  
 Story, Frank Crawford, Doerun, October 30, 1933, aged 37.  
 Terry, William R., Shellman, February 14, 1934, aged 71.  
 Thomas, Logan Lightfoot, Dawson, December 11, 1933, aged 68.  
 Vann, Henry A., Boston, April 18, 1933, aged 83.  
 Waits, Charles Edward, Atlanta, October 21, 1933, aged 44.  
 Walker, Nathaniel Pierce, November 20, 1933, aged 53.  
 Wallace, Fred R., Cordele, January 13, 1934, aged 77.  
 Wells, George R., Monroe, November 26, 1933, aged 65.  
 Witt, Marvin Sumter, Manchester, March 3, 1934, aged 48.

\*This is the list of members who have died since our last annual session as it appears on our records. Please notify the Secretary-Treasurer of any errors or omissions.

THE SURGICAL ASSOCIATION  
 OF THE  
 ATLANTA AND WEST POINT RAILROAD  
 COMPANY,  
 WESTERN RAILWAY OF ALABAMA,  
 GEORGIA RAILROAD

FOURTEENTH ANNUAL SESSION  
 HOTEL RICHMOND

Augusta  
 May 8, 1934

OFFICERS

J. R. Garner, Atlanta, Chief Surgeon.  
 W. W. Harper, Selma, Ala., President.  
 R. H. Fike, Atlanta, Vice-President.  
 Mrs. R. E. Cooper, Atlanta, Secretary-Treasurer.

EXECUTIVE BOARD

J. R. Garner, Atlanta, Chairman.  
 W. W. Harper, Selma, Ala., Ex-Officio Chairman.  
 Carlton A. Lee, Atlanta.  
 Hugh M. Lokey, Atlanta.  
 Willis B. Jones, Atlanta (deceased).

MAY 8, 1934, 9:00 A.M.

SCIENTIFIC PROGRAM

1. Traumatic Abdomen.  
Floyd W. McRae, Atlanta.
2. Covetous Neurosis.  
Newdigate M. Owensby, Atlanta.
3. Head Injuries.  
Edgar F. Fincher, Jr., Atlanta.
4. Suprapubic Cystotomy vs. Catheterization.  
Montague L. Boyd, Atlanta.
5. Pneumonia In Connection with Injuries.  
V. P. Sydenstricker, Augusta.
6. Hypertension.  
Wm. R. Houston, Augusta.
7. Management of Fractures.  
H. M. Michel, Augusta.
8. Laceration of the Extremities.  
Dan Y. Sage, Atlanta.
9. Difficulty In Diagnosing Cancer of the Stomach.  
R. H. Fike, Atlanta.
10. President's Address—Knee Trauma.  
W. W. Harper, Selma, Ala.

Members of the staff in Augusta will provide for a motorcade in the afternoon to visit Lenwood Hospital (United States Veterans' Hospital No. 62) and other places of interest. The motorcade will leave Hotel Richmond about 4:00 o'clock, immediately after the conclusion of the scientific program.

8:00 P.M.

Dinner will be served to all members of the Association at Hotel Richmond as the guests of the Railroad Company. Other invited guests are: Dr. Louis Hamman, Baltimore; Dr. Waltman Walters, Rochester, Minn.; Dr. Emil Novak, Baltimore; Dr. O. C. Wenger, Hot Springs, Ark.; and Dr. Chas H. Richardson, Macon, President of the Medical Association of Georgia. Each of the honorary guests will be asked to make a short talk.

Hotel Richmond, Augusta, will be headquarters for the Eighty-Fifth Annual Session of the Association, May 8 to 11, 1934. The general meetings will be held in the Ball Room on the mezzanine floor.



# CONSTITUTION AND BY-LAWS OF THE MEDICAL ASSOCIATION OF GEORGIA

## Constitution

### ARTICLE I.—NAME OF THE ASSOCIATION.

The name and title of this organization shall be the Medical Association of Georgia.

### ARTICLE II.—PURPOSES OF THE ASSOCIATION

The purpose of this Association shall be to federate and bring into one compact organization the entire medical profession of the State of Georgia; to extend medical knowledge and advance medical science; to elevate the standard of medical education and to secure the enactment and enforcement of just medical laws; to promote friendly intercourse among physicians; to guard and foster the material interests of its members and to protect them against imposition; and to enlighten and direct public opinion in regard to the great problems of state and medicine, so that the profession shall become more capable and honorable within itself, and more useful to the public, in the prevention and cure of disease, and in prolonging and adding comfort to life.

### ARTICLE III.—COMPONENT SOCIETIES

Component societies shall consist of those county societies which hold charters from this Association.

### ARTICLE IV.—COMPOSITION OF THE ASSOCIATION

Section 1. This Association shall consist of members and delegates.

Sec. 2. Members: The members of this Association shall be the members of the component county medical societies to which only white physicians shall be eligible.

Sec. 3. Delegates: Delegates shall be those members who are elected in accordance with this Constitution and By-Laws to represent their respective component societies in the House of Delegates of this Association.

### ARTICLE V.—HOUSE OF DELEGATES

The House of Delegates shall be the legislative body of the Association, and shall consist of: (1) delegates elected by the component county societies; (2) the officers of the Association enumerated in Section 1 of Article IX of the Constitution; (3) ex-presidents and delegates to the American Medical Association.

### ARTICLE VI.—COUNCIL

The Council shall be the Board of Trustees and Finance Committee of the Association. The Council shall have full authority and power of the House of Delegates between annual sessions, unless the House of Delegates be called into session as provided in the Constitution and By-Laws.

It shall consist of the Councilors, the President, the President-Elect and the Secretary-Treasurer of the Association. Five of its members shall constitute a quorum.

### ARTICLE VII.—SESSIONS AND MEETINGS

Section 1. The annual sessions shall take place on

the second Wednesday in May at such place as shall be designated by the Association, provided that in case of conflict with the meeting of the American Medical Association the Council may change the date by publishing a notice in the Journal of the Medical Association of Georgia three months before the session.

Sec. 2. Special meetings of either the Association or the House of Delegates may be called by a two-thirds vote of the Council, or upon the petition of twenty delegates.

### ARTICLE VIII.—SECTIONS AND DISTRICT SOCIETIES

Section 1. The House of Delegates may provide for a division of the scientific work of the Association into appropriate sections, and for the organization of such Councilor district societies as will promote the best interests of the profession such societies to be composed exclusively of members of component county societies.

### ARTICLE IX.—OFFICERS

Section 1. The officers of this Association shall be a President, President-Elect, two Vice-Presidents, a Secretary-Treasurer, a Parliamentarian, and one Councilor from each congressional district in the state.

Sec. 2. The officers, except the Secretary-Treasurer, Parliamentarian and Councilors, shall be elected annually, provided that after the annual meeting of 1928 a President-Elect and not a President shall be elected annually. The President-Elect shall assume his office as President immediately after the next annual meeting following his election. The terms of the Councilors shall be for three years, as may be arranged, viz: the Councilor for the first, second, third and fourth districts for three years; those for the fifth, sixth, seventh, and eighth districts for one year; those for the ninth and tenth districts for two years. The Secretary-Treasurer shall be elected for a term of five years, and the Parliamentarian for a term of three years. All these officers shall serve until their successors are elected and installed.

Sec. 3. The officers of this Association shall be elected by ballot at 12 o'clock noon on the third day of the annual session. Nomination for office shall be made orally, but the nominating speech must not exceed two minutes. The Councilors shall be elected at the same time, but on nomination by their respective District Societies at the annual meeting of such Societies preceding the meeting of the Association at which the vacancy occurs. If there is no election on the first ballot, the three names receiving the highest number of ballots shall be voted on, the other names being dropped. If there is no election on the second ballot, the two names receiving the highest number of ballots shall be voted on until an election occurs. Delegates to the American Medical Association shall be elected at the same time and in the same manner.

### ARTICLE X.—FUNDS AND EXPENSES

Funds shall be raised by an equal per capita assessment on each component society. The amount of the assessment shall not exceed the sum of \$10.00 per capita

per annum. Funds may be appropriated by the House of Delegates to defray the expenses of the Association, for publications, and for such other purposes as will promote the welfare of the profession. All resolutions appropriating funds must be approved by the Finance Committee before action is taken thereon. (Amended, May, 1929, page 482.)

#### ARTICLE XI.—RATIFICATION

The House of Delegates shall submit all questions before it to the Association for ratification.

#### ARTICLE XII.—THE SEAL

The Association shall have a common seal, with power to break, change or renew the same at pleasure.

#### ARTICLE XIII.—AMENDMENTS

Any amendment that may be offered to the Constitution shall lie over until the next annual session; and for its adoption at such session shall require a two-thirds vote of all present and voting.

### By-Laws

#### CHAPTER I.—MEMBERSHIP

Section 1. The name of a physician on the properly certified roster of members of a component society, which has paid its annual assessment, shall be *prima facie* evidence of membership in this Association.

Sec. 2. Any person who is under sentence of suspension or expulsion from a component society or whose name has been dropped from its roll of members, shall not be entitled to any of the rights or benefits of this Association, nor shall he be permitted to take part in any of its proceedings until he has been relieved of such disability.

Sec. 3. Each member in attendance at the annual session shall enter his name on the registration book, indicating the component society of which he is a member. When his right to membership has been verified by reference to the roster of his society, he shall receive a badge which shall be evidence of his right to all the privileges of membership at that session. No member shall take part in any of the proceedings of an annual session until he has complied with the provisions of this section.

Sec. 4. Any member for old age, length of service, or other good reasons, may, upon recommendation of the Board of Censors, be elected to honorary membership of his county society without dues. Such member shall be enrolled as an honorary member of his county society and the Association, and shall be entitled to all the privileges of the Association.

Sec. 5. In addition to regular and honorary members, upon recommendation of the Board of Censors, associate members and intern members may be elected by any constituent county society without the payment of dues. The associate members will be such as may be eligible for regular membership, but not in very active practice and usually with a very limited income—also certain salaried physicians and members of the army, navy, U. S. Public Health Service, etc. These are privileged to attend and participate in all scientific meetings, but can not hold office and do not receive Journal or benefits of Medical Defense. Intern members are limited to interns in hospitals and are only

privileged to attend and participate in scientific meetings. (1933).

#### CHAPTER II.—GENERAL MEETINGS

Sec. 1. All registered members may attend and participate in the proceedings and discussions of the general meetings. Visitors duly accredited to represent the Association of other states, or of the District of Columbia, not exceeding two in number for each organization, may attend upon, and participate in the discussion of the general meetings, but shall not have a vote. Such delegates may read papers upon invitation of the Committee on Scientific Work. The general meetings shall be presided over by the President or by one of the Vice-Presidents.

Sec. 2. No papers or addresses before the Association, except those of the President and invited essayists, shall occupy more than fifteen minutes in their delivery; and no member shall speak longer than five minutes, nor more than once on any subject, provided that each essayist shall have five minutes in which to close the discussion of his paper.

Sec. 3. Entertainments. Any social entertainment which may be given by this Association shall be confined to the evening of the second day.

Sec. 4. Guests. Any physician not a resident of this state but a member of his state association, or any distinguished scientist not a physician, may be counted a guest during any annual session on invitation of the President, and shall be accorded the privilege of participating in the scientific work of that session.

#### CHAPTER III.—HOUSE OF DELEGATES

Section 1. The House of Delegates shall meet on the day preceding the first day of the annual session, the time to be fixed by the Committee on Scientific Work. It may adjourn from time to time as may be necessary to complete its business; provided that its hours shall conflict as little as possible with the general meetings. The order of business shall be arranged as a separate section of the program.

Sec. 2. Each component county society shall be entitled to send to the House of Delegates each year one delegate for every fifty members, and one for each fraction thereof, but each component society which has made its annual report and paid its assessment as provided in this Constitution and By-Laws shall be entitled to one delegate. Should the regular delegate from any county not be present at the meeting, the President shall appoint a substitute from that county to act.

Sec. 3. Twenty delegates present shall constitute a quorum.

Sec. 4. It shall, through its officers, council and otherwise, give diligent attention to and foster the scientific work and spirit of the Association, and shall constantly study and strive to make each annual session a stepping-stone to future ones of higher interest.

Sec. 5. It shall consider and advise as to the material interest of the profession, and of the public in those important matters wherein it is dependent on the profession, and shall use its influence to secure and enforce all proper medical and public health legis-



lation, and to diffuse popular information in relation thereto.

Sec. 6. It shall make careful inquiry into the condition of the profession of each county in the State, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interests in such county societies as already exist, and for organizing the profession in counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse among physicians of the same locality, and shall continue these efforts until if possible every physician in every county of the State has been brought under medical society influence.

Sec. 7. It shall encourage post-graduate and research work as well as home study, and shall endeavor to have the results utilized, and intelligently discussed in the county societies.

Sec. 8. It shall divide the State into councilor districts, one for each congressional district, and when the best interests of the Association and profession will be promoted thereby, organize in each a district medical society, and all members of component county societies and no others shall be members in such district societies.

Sec. 9. It shall have authority to appoint committees for special purposes from among members of the Association who are not members of the House of Delegates. Such committees shall report to the House of Delegates and may be present and participate in the debate thereon.

#### CHAPTER IV.—DUTIES OF OFFICERS

Section 1. The President shall preside at all meetings of the Association and of the House of Delegates; shall appoint all committees not otherwise provided for, and shall perform such other duties as custom and parliamentary usage may require. He shall be the real head of the profession of the State during his term of office, and as far as practicable, shall visit, by appointment, the various sections of the State and assist the Councilors in building up the county societies, and in making their work more practical and useful.

In order to give him a better opportunity of becoming more fully acquainted with his duties and with the needs of the Association, the President shall be elected one year prior to taking office. During this time he shall be known as President-Elect and shall be ex-officio member of the standing committees, and shall make recommendations at the next annual session. (Amended, May, 1930.)

Sec. 2. The Vice-Presidents shall assist the President in the discharge of his duties. In the event of the President's death, resignation or removal, the Vice-Presidents, in their order, shall succeed him.

Sec. 3. The Secretary-Treasurer shall give bond in the sum of One Thousand Dollars. He shall demand and receive all funds due the Association, together with the bequests and donations.

Sec. 4. The Secretary-Treasurer shall attend the general meetings of the Association and the meetings

of the House of Delegates, and shall keep the minutes of their respective proceedings in separate record books. He shall be ex-officio Secretary of the Council. He shall be custodian of all record-books and papers belonging to the Association. He shall provide for the registration of the members, delegates and accredited visitors at the annual session. He shall, with the cooperation of the secretaries of the component societies, keep a card-index register of all the legal practitioners of the State by counties, noting on each his status in relation to his county society, and on request transmit a copy of this list to the American Medical Association. He shall aid the Councilors in the organization and improvement of the county societies in the extension of the power and usefulness of this Association. He shall conduct the official correspondence, notifying members of meetings, officers of their election, and committees of their appointment and duties. He shall employ such assistants as may be ordered by the House of Delegates with the approval of the Association, and shall make an annual report to the Association. He shall supply each component society with the necessary blanks for making their annual reports; shall keep an account with the component societies, charging against each society its assessment and collect the same. Acting with the Committee on Scientific Work, he shall prepare and issue all programs. The amount of his salary shall be fixed by the Association. He shall be editor of the Journal of the Medical Association of Georgia. He shall employ such assistants as may be ordered by the Council or the House of Delegates. He shall annually make a report of his doings to the House of Delegates.

He shall furnish a balance sheet at each annual meeting for the past fiscal year to be published in the Journal. This shall consist of an itemized statement of all financial transactions of the past year, all accounts made, money received and from whom and all moneys disbursed, to whom, and for what purpose, with vouchers attached. A fiscal year includes the period of time between the first day of May and the last day of April.

#### CHAPTER V.—COUNCIL

Section 1. The Council shall meet on the day preceding the annual session and daily during the session, and at such other times as necessity may require, subject to the approval of the President. It shall meet on the last day of the annual session of the Association to organize and outline work for the ensuing year. It shall elect a chairman and clerk, who, in the absence of the Secretary of the Association, shall keep a record of its proceedings. It shall, through its chairman, make an annual report to the House of Delegates. It shall be the business body of the Association and attend to the business of the Association in the interim between meetings.

Sec. 2. Each Councilor shall be organizer and peacemaker for his district. He shall visit each county in his district at least once a year for the purpose of organizing component societies where none exist,

for inquiring into the conditions of the profession, and for improving and increasing the zeal of the county societies and their members. He shall make an annual report of his work and of the condition of the profession of each county in his district at the annual session of the House of Delegates. The necessary traveling expenses incurred by such Councilor in the line of the duties herein imposed may be allowed by the House of Delegates on a properly itemized statement, but this shall not be construed to include his expense in attending the annual session of the Association. Each Councilor may appoint a Vice-Councilor to assist him in the performance of his duties in that district.

Sec. 3. The Council shall be the board of censors of the Association. It shall consider all questions involving the right and standing of members, whether in relation to other members, to the component societies, or to this Association. All questions of an ethical nature brought before the House of Delegates or the general meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members of a component society, on which an appeal is taken from the decision of an individual Councilor, or to which attention has been called by the Councilor or interested members. It shall hear and decide all questions affecting unethical conduct on the part of any members at any annual session, and its decision in all such matters shall be final when ratified by the Association.

Sec. 4. In sparsely settled sections it shall have authority to organize the physicians of two or more counties into societies, to be suitably designated so as to distinguish them from district societies, and these societies, when organized and chartered shall be entitled to all rights and privileges provided for component societies until such counties shall be organized separately.

Sec. 5. The Council shall provide for and superintend the publication and distribution of all proceedings, transactions and memoirs of the Association, and shall have authority to appoint such assistants to the editor as it deems necessary. It shall manage and conduct the Journal of the Medical Association of Georgia, which is the organ of the Association, and all money paid into the treasury as dues shall be received as subscriptions to the Journal.

All money received by the Council and its agents, resulting from the discharge of the duties assigned to them, must be paid to the Secretary-Treasurer of the Association. As the Finance Committee it shall annually audit the accounts of the Secretary-Treasurer and other agents of this Association, and present a statement of the same in its annual report to the House of Delegates, which report shall also specify the character and cost of all the publications of the Association during the year, and the amount of all other property belonging to the Association under its control, with such suggestions as it may deem necessary. In the event of a vacancy in the office of the

Secretary-Treasurer, the Council shall fill the vacancy until the next annual election.

Sec. 6. All reports on scientific subjects and all scientific discussions and papers heard before the Association, shall be referred to the Journal of the Medical Association of Georgia for publication. The editor, with the consent of the Councilor for the district in which he resides, may curtail or abstract papers or discussions, and the Council may return any paper to its author which it may not consider suitable for publication.

Sec. 7. All commercial sessions shall be within the control and direction of the Council.

Sec. 8. In the absence of a Councilor and Vice-Councilor the President is empowered to appoint a representative from the district as acting Councilor, who shall have full rights and power of a Councilor.

Sec. 9. Each Councilor shall render at every session a written report of each county in his district.

Sec. 10. Any member of the Council who fails to attend two regular successive sessions of the Council, or whose district does not show evidence of the performance of his duties during the year, unless he renders an acceptable excuse to the Council, is subject to have his position declared vacant by the President and a successor appointed by the President.

#### CHAPTER VI.—COMMITTEES

Section 1. The standing committees shall be as follows:

A Committee on Scientific Work.

A Committee on Public Policy and Legislation.

A Committee on Arrangements.

A Committee on Medical Defense, and such other committees as may be necessary.

Sec. 2. The Committee on Scientific Work shall consist of four members of which the Secretary-Treasurer shall be one. The other three members shall be appointed for terms of one, two, and three years, respectively. The vacancy which will occur each year by the expiration of the term of one member shall be filled by the President with an appointment for three years. The member who has the shortest time to serve shall be Chairman. The committee shall determine the character and scope of the scientific proceedings of the Association for each session. Thirty days previous to each annual session it shall prepare and issue a program announcing the order in which papers, discussions and other business shall be presented.

This By-Law shall not prohibit the Committee on Scientific Work from inviting not more than two distinguished members of the national organization to deliver addresses or read papers at any annual meeting.

Sec. 3. The Committee on Public Policy and Legislation shall consist of three members and the President and Secretary, the Commissioner of Health of the State of Georgia, and a sub-committee of three members from each Councilor District appointed by the chairman when needed. It shall represent the Association in securing and enforcing legislation in



the interest of public health and of scientific medicine. It shall keep in touch with professional and public opinion, shall endeavor to shape legislation so as to secure the best results for the whole people, and shall strive to organize professional influence so as to promote the general good of the community in local, state and national affairs and elections.

Sec. 4. The Committee on Arrangements shall be appointed by the component society in which the annual session is to be held. It shall provide suitable accommodations for the meeting places of the Association and of the House of Delegates and, of their respective committees, and shall have general charge of all arrangements. Its chairman shall report an outline of the arrangements to the Secretary-Treasurer for publication in the program, and shall make additional announcements during the session as occasion may require.

Sec. 5. The Committee on Medical Defense shall consist of five members, of whom the Chairman of the Council and the Secretary-Treasurer of the Association shall be members. The other members, one of whom shall act as Chairman of the Committee, shall be elected by the Council for a period of five years. Those elected at this meeting (April 19, 1916), shall serve one, three and five years, respectively.

It shall be the duty of the Committee on Medical defense to investigate and defend all damage suits against the Medical Association of Georgia; to investigate all claims of civil malpractice made against its members; to take full charge of such cases, which after investigation, they decide to be proper cases for defense; to defend all such cases in the courts of last resort, to furnish General Counsel and pay court cost usual to such litigation, and reasonable fees for local attorneys as shall be arranged by General Counsel. Provided that any member who has indemnity insurance shall have such insurance bear its portion of the expense. However, they shall not pay, or obligate the Medical Association of Georgia to pay any judgment rendered against any member upon the final determination of any case. They shall be empowered to contract with such agents or attorneys as they may deem necessary for the proper carrying out of this By-Law. (Amended, May 14, 1931, page 359 of Journal.)

The assistance for defense, as herein provided, shall be available only to members of the Medical Association of Georgia in good standing. Any member who has not paid his annual dues by April 1st shall not be considered in good standing in the application of this By-Law.

Any member or members of the Association threatened with suit for civil malpractice shall immediately communicate with the Secretary of the Association and shall give full and complete information in reference to all the circumstances alleged in the complaint. The Secretary shall proceed immediately to investigate the circumstances reported and shall advise with the attorneys or agents employed by the Committee for this purpose. The member sued, or threatened with

suit, shall be consulted and shall have the complete confidence of the Committee in all transactions connected with the investigation in question. The Committee shall have the authority to require of a constituent society or the president thereof, the appointment of a committee of investigation in any such case, and it may direct the committee so appointed to report to the Committee on Medical Defense and not to the society from which it was appointed.

The Committee on Medical Defense may also, at its discretion, arrange to prosecute illegal practitioners in the State of Georgia and assist in the enforcement of the Medical Practice Act of his State.

## CHAPTER VII.—COUNTY SOCIETIES

Section 1. All county societies now in affiliation with this Association, or those which may hereafter be organized in the State, which have adopted principles of organization not in conflict with this Constitution and By-Laws, shall on application, receive a charter from and become a component part of this Association.

Sec. 2. As rapidly as can be done after the adoption of this Constitution and By-Laws, a medical society shall be organized in every county in the State in which no component society exists, and charter shall be issued thereto.

Sec. 3. Charters shall be issued only on approval of the Council, and shall be signed by the President and Secretary of this Association. The Association shall have authority to revoke the charter of any component society whose actions are in conflict with the letter or spirit of this Constitution and By-Laws.

Sec. 4. Only one competent medical society shall be chartered in any county.

Sec. 5. Each county society shall judge of the qualifications of its own members, but as such societies are the only portals to this Association, every reputable and legally registered white physician who does not practice or claim to practice, nor lend his support to any exclusive system of medicine, shall be eligible to membership. Before a charter is issued to any county society, full and ample notice and opportunity shall be given to every such physician in the county to become a member.

Sec. 6. No matter what the unethical conduct or discipline of the members of the county society may be, both plaintiff and defendant shall have the right to appeal to the Council whose decision shall be final when ratified by the Association.

Sec. 7. In hearing appeals the Council may admit oral or written evidence, as in its judgment will best and most fairly present the facts, but in case of every appeal, both as a board and as individual Councilors in district and county work, efforts at conciliation and compromise shall precede all such hearings.

Sec. 8. When a member in good standing in a component county society moves to another county in this state, he shall be given a written certificate of these facts by the secretary of his society, without cost, for transmission to the secretary of the society in

the county to which he moves. Such member shall be considered to be in good standing from the county society from which he was certified and in the Medical Association of Georgia to the end of the period for which his dues have been paid. (Amended, May, 1929, pages 476-7.)

Sec. 9. A physician living on or near a county line may hold his membership in that county most convenient for him to attend, on permission of the component society in whose jurisdiction he resides.

Sec. 10. Each component society shall have general direction of the affairs of the profession in its county, and its influence shall be constantly exerted for bettering the scientific, moral and material condition of every physician in the county; and systematic efforts shall be made by each member, and by the society as a whole, to increase the membership until it embraces every qualified physician in the county.

Sec. 11. At some meeting in advance of the annual session of this Association, each county society shall elect a delegate or delegates to represent it in the House of Delegates of this Association, in the proportion of one delegate to each fifty members, or fraction thereof, and the Secretary of the society shall send a list of such delegates to the Secretary of this Association at least ten days before the annual session.

Sec. 12. The Secretary of each component society shall keep a roster of its members, and of the non-affiliated registered physicians of the county, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this State, and such other information as may be deemed necessary. In keeping such roster the Secretary shall note any changes in the personnel of the profession by death, or by removal to or from the county, and in making his annual report he shall be certain to account for every physician who has lived in the county during the year.

Sec. 13. The Secretary of each component society shall forward its assessment, together with its roster of officers and members, list of delegates, and lists of non-affiliated physicians of the county, to the Secretary of this Association each year, thirty days before the annual session.

Sec. 14. Any county society which fails to pay its assessment, or make the report required, on or before April 1 of each year, shall be held as suspended, and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Association, or of the House of Delegates, until such requirement has been met.

Sec. 15. The Secretary of each county society shall report to the Journal of the Medical Association of Georgia full minutes of each meeting and forward to it all scientific papers and discussions which the society shall consider worthy of publication.

#### CHAPTER VIII.—RULES AND ETHICS

Section 1. The deliberations of this Association shall be governed by parliamentary usage as contained in Roberts' Rules of Order, when not in conflict with this Constitution and By-Laws.

Sec. 2. All papers read before the Association shall become its property. Each paper shall be deposited with the Secretary when read, and if this is not done it shall not be published.

Sec. 3. The principles of medical ethics of the American Medical Association shall be those of this Association.

Sec. 4. Any member of this Association, on locating in a new place for practicing his profession may place his professional card, containing name, address, telephone number, and statement as to whether or not his practice will be limited to any particular class of disease, in the local paper for a period of not longer than one month. The placing of such card for this period of time shall not be considered unethical. The use of the word "specialist" by any member in connection with his name in any newspaper, telephone directory, or other public places, shall be considered unethical.

#### CHAPTER IX.—AMENDMENTS

These By-Laws may be amended at any annual session by a majority vote of the Association after the amendment has lain on the table for one day.

#### RESOLUTIONS, MEDICAL ASSOCIATION OF GEORGIA 1921

Resolved, That a member who sends in a title of a paper to be placed on the program and is not present to read the paper, shall pay the penalty of not having an opportunity to appear on the program for two years, unless he presents an excuse acceptable to the Committee on Scientific Work.

1922

Be it Resolved, That the House of Delegates recommend that the Committee on Scientific Work make available on the program of the State Association space for two papers from each Councilor district; that a definite time be assigned for reading and discussion of each of these papers, and they be given precedence over all other business. The said papers are to be selected by the Committee on Scientific Work, and, in case a writer does not respond when his name is called, some paper will be substituted and the schedule not deranged. The President ruled that this resolution is only a recommendation and not a law.

1928

Resolved, That the delegates to the A. M. A. elected at this and succeeding meetings of the Medical Association of Georgia be installed January 1st, following their election, and that their term of service run for two years thereafter. And be it further

Resolved, That our delegates be authorized to attend the regular and any called meeting of the House of Delegates of the American Medical Association during the term to which they are elected.

1929

Resolved, That the House of Delegates approve the increase of dues to \$7.00 per capita per annum.

1933

Resolved, That the House of Delegates approve the reduction of dues to \$6.00 per capita for the year 1934.



Resolved, That the House of Delegates adopt the report of the Council authorizing the Committee on Public Policy and Legislation to spend the necessary amount of money to carry on its work.

Resolved, That in order to expedite the business of the House of Delegates, all reports of special and regular committees of the Association involving matters of public policy, legislation or appropriation of the funds of the Association be submitted in writing to the Secretary of the Association a sufficient time in advance of the regular annual session, about March 15th, to permit of the publication of said recommendations either in the official program prior to the session or in a special circular that shall be mailed to the constituent societies, in order that the delegates may be advised of the proposed changes. (May, 1929, page 475.)

#### PROPOSED AMENDMENTS TO CONSTITUTION AND BY-LAWS

*Constitution. Article IX, Section 3.* To change the time for the election of officers.

*By-Laws. Chapter VI, Section 2.* To limit the scientific meetings for each annual session to two days, instead of the present three-day session.

*Constitution, Article IX,* To add Section 4, as follows: "The members of the State Board of Health shall be nominated by their respective district societies at the annual meeting of such societies preceding the annual session of this Association, and in failure of nomination by district societies, they be nominated by the delegates present from each of the district societies, all of which shall be ratified by this Association."

#### COUNTIES REPORTING FOR 1934

##### *Stewart-Webster Counties Medical Society*

The Stewart-Webster Counties Medical Society announces the following officers for 1934:

President—W. C. Sims, Richland.

Secretary-Treasurer—J. M. Kenyon, Richland.

##### *Wayne County Medical Society*

The Wayne County Medical Society announces the following officers for 1934:

President—T. G. Ritch, Jesup.

Vice-President—J. T. Colvin, Jesup.

Secretary-Treasurer—A. J. Gordon, Jesup.

##### *Chattooga County Medical Society*

The Chattooga County Medical Society announces the following officers for 1934:

President—F. W. Hall, Summerville.

Vice-President—W. J. Bryant, Summerville.

Secretary-Treasurer—H. D. Brown, Summerville.

Censors—B. F. Shamblin, N. A. Funderburk and R. N. Little.

##### *Taylor County Medical Society*

The Taylor County Medical Society announces the following officers for 1934:

President—Lewis Beason, Butler.

Vice-President—S. H. Bryan, Reynolds.

Secretary-Treasurer—R. C. Montgomery, Butler.

Delegate—S. H. Bryan, Reynolds.

##### *Fulton County Medical Society*

The Fulton County Medical Society announces the following officers for 1934:

President—Marion C. Pruitt, Atlanta.

President-Elect—Edgar D. Shanks, Atlanta.

Vice-President—Mark S. Dougherty, Atlanta.

Secretary-Treasurer—M. T. Harrison, Atlanta.

Delegate—H. H. Askew, Atlanta.

Alt. Delegate—T. B. Armstrong, Atlanta.

Delegate—M. T. Benson, Atlanta.

Alt. Delegate—B. T. Beasley, Atlanta.

Delegate—J. J. Clark, Atlanta.

Alt. Delegate—R. H. Oppenheimer, Emory University.

Delegate—J. C. Massee, Atlanta.

Alt. Delegate—Avery Dimmock, Atlanta.

Delegate—Marion C. Pruitt, Atlanta.

Alt. Delegate—Geo. F. Eubanks, Atlanta.

Delegate—C. W. Roberts, Atlanta.

Alt. Delegate—W. E. Barber, Atlanta.

Delegate—Edgar D. Shanks, Atlanta.

Alt. Delegate—Geo. W. Fuller, Atlanta.

##### *Decatur-Seminole Counties Medical Society*

The Decatur-Seminole Counties Medical Society announces the following officers for 1934:

President—M. A. Fort, Bainbridge.

Vice-President—Carl B. Welch, Attapulgus.

Secretary-Treasurer—L. W. Willis, Bainbridge.

Delegate—R. F. Wheat, Bainbridge.

##### *Burke County Medical Society*

The Burke County Medical Society announces the following officers for 1934:

President—J. M. Byne, Jr., Waynesboro.

Vice-President—W. R. Lowe, Midville.

Secretary-Treasurer—R. L. Miller, Waynesboro.

Delegate—R. L. Miller, Waynesboro.

Censors—J. M. Byne, Jr., W. W. Hillis, and R. L. Miller.

##### *Monroe County Medical Society*

The Monroe County Medical Society announces the following officers for 1934:

President—W. J. Smith, Juliette.

Vice-President—J. O. Elrod, Forsyth.

Secretary-Treasurer—G. H. Alexander, Forsyth.

##### *Turner County Medical Society*

The Turner County Medical Society announces the following officers for 1934:

President—R. D. Rawlins, Rebecca.

Vice-President—W. J. Turner, Ashburn.

Secretary-Treasurer—J. H. Baxter, Ashburn.

Delegate—H. M. Belflower, Sycamore.

Alt. Delegate—W. L. Story, Ashburn.

## WOMAN'S AUXILIARY OFFICERS

President—Mrs. J. Bonar White, Atlanta.

President-Elect—Mrs. J. E. Penland, Waycross.

First Vice-President—Mrs. J. J. Pilcher, Wrens.

Second Vice-President—Mrs. R. C. Pendergrass, Americus.

Third Vice-President—Mrs. G. Hugo Johnson, Savannah.

Recording Secretary—Mrs. Warren A. Coleman, Eastman.

Corresponding Secretary—Mrs. E. A. Allen, Atlanta.

Treasurer—Mrs. Chas. Usher, Savannah.

Historian—Mrs. E. R. Harris, Winder.

Parliamentarian—Mrs. J. M. Barnett, Albany.

Editor—Mrs. W. A. Selman, Atlanta.

### TO OUR HUSBANDS DOCTORS' DAY MARCH 30TH

About 5,000 years ago, there lived a man whose services to his king and country were so magnificent that after his death, he was worshipped as a god. This is the first physician of whom we have historical knowledge, his name, Imhotep, signifies "He who comes in peace," words that distinguish the medical profession throughout the ages.

The next world-known physician was Hippocrates, the "Father of Medicine," who lived in the 5th century B. C. He broke all traditions by declaring disease was not from supernatural forces, but was the responsibility of man. He based his reasonings on observations and facts instead of hypotheses and if his teachings with their incentives for further rationalization had been followed, world history would have been different.

But Greek civilization and the Romans again systematized superstition. Galen, 2nd century A. D., admitted he was quite a fellow and wrote so brilliantly and convincingly about human anatomy, based on his dissections of oxen, dogs, et cetera, and of what he knew and what he guessed, that he steered the Art of Healing to a side road and left it to obstruct all developments for a dozen or more centuries. Galen, Aristotle, the Bible told it all, and speculation, tradition, revelation turned the attention to the spiritual man away from the physical man. Soranus, in Rome, 2nd Century A.D., the first to teach kindness to women at childbirth, who wrote for the information of midwives and used the podalic version, was quickly forgotten and, with Hoppocrates, gathered dust on monastery shelves and the healing art degenerated to salves, poultices, spells and talismans. Death became expected as the results of the sins of human living: the physician of the soul gained the ascendancy and the physician of the body was regarded as ignoble, insignificant. Plagues, wars, illnesses devastated generation after generation, but the people were spell-bound by theology and the supernatural origin of disease was retained.

But the profession always kept the candle of reasoning lit; sometimes so dimly that centuries pass in apparent darkness. The gleam was there and gradually it increased and again the physician became a leader in shaping civilization. Pare, in the 15th century, introduced tying severed blood vessels instead of cauterizing them and after thirteen centuries, he reintroduced the podalic version. One of his remarks is indicative of the humility of the profession,—"I dressed his wounds and God healed him."

Modern medicine begins with labors of Vesalius in the 16th century and the completion of his dissections of the human body and the publishing of the first book on human anatomy based on facts. A book of instructions for midwives and the first school for them mark the same century. The 17th century saw the discovery of the circulation of the blood by Harvey; the microscope became available and the path paved for the knowledge of the causes and prevention of diseases. With the 18th century came vaccination against smallpox by Jenner; Laennec invented the stethoscope; scientific facts of many kinds were accumulated; microbes were not only seen but found to "have parents." The 19th century brought the causes of the dissemination of puerperal fever, by Semmelweis; anesthesia was discovered by Long; principles of antisepsis introduced by Lister; humane treatment given the insane.

Long and patient labors have given the protection of inoculations for diphtheria, typhoid and definite knowledge of the transmitting as well as the causative agents of many diseases, so that the 20th century has provided us, through the medical profession, with amazing and powerful weapons to add to the discoveries of other centuries for the defense of human living and the promotion of human happiness.

We write voluminously about the great aggressors, Alexander, Caesar, Napoleon, and their bloody trails, but who even knows of those men who fought for years, most of them losing their lives in the battle to make human life safe? We honor Columbus be-



cause he sailed unknown seas and discovered America. Who honors those men who, for years, with the unknown before *them*, submitted to experiments on themselves and discovered the microbes which menace men and the medicines and vaccines which defend them? We read of saints who gave their lives for religious beliefs but what instruction do we receive about martyrs of medical science, burned at the stake because they stooped to lowly women and children or who lost their lives to protect their observations and beliefs?

Kings and warriors have changed our destinies, but the medical profession and its protection have shaped and changed our civilization. Remove it today and we are at the mercy of pestilences which destroyed other generations. The speed of modern transportation would increase the ravages and the desolation.

When illness comes, does the watcher at the bedside want to hear of statesmen and soldiers? Does she ask for a song or a poem? NO! The words which flood her being with relief and hope and courage come from the observer at the window,—“The Doctor has come!”—In those four words, the accumulated medical knowledge and experience of all times come to our protection and relief.

History is unjust and inadequate because it omits these benefactors and pioneers. The every-day world knows nothing or little of the weary pace of uncounted doctors, uncomplaining, unknown, unsung, whose work is their glory. We, your wives, realize this and we believe that the knowledge of the valiant, vivid struggles and sacrifices which have been endured to protect communities and guard individuals should be promulgated. It is unfair to the profession and to the public and recent endeavors to correct this are most praiseworthy.

Today, we honor the pursuers of truth, the practitioners of the medical arts wherever they have lived and regardless of time. We salute YOU, our husbands, our physicians! If the only certain happiness is doing good, then your satisfactions are unique. You use your watch for your patients' pulse, but never to estimate your service. You preside in the struggle of life over death and ask neither notice nor appreciation. Neither space or time limit the giving of yourselves, and your reward is the inward rejoicing that you have done your best. As physician and as citizen, again we salute you; and pray that we may walk through the years beside you, our love and respect sustaining you until we may enter with you into the Living Peace.

#### CLARKE COUNTY MEETING

The Clarke County Auxiliary, the P.-T. A. Council of Athens, and the League of Women Voters met at Mell Auditorium for a Mother Welfare Program. Addresses were given by Dr. G. O. Whelchel, Dr. H. M. Fullilove, Dr. Weyman Davis, Dr. Paul Holliday. The study group of the Athens League postponed its regular meeting to attend and co-operate. Mrs. Waldo Rice, President of the Athens P.-T. A. Council, issued this statement, “Through the courtesy of the Clarke County Medical Auxiliary, the P.-T. A. is privileged to sponsor its Mother Welfare program, and doctors will speak on the prevention and control of cancer, and of prenatal care. This subject is of vital interest and is part of the state-wide program of the Medical Association of Georgia and its Auxiliary. No greater privilege could be afforded us than being allowed to join in this unselfish contribution of our medical men.” One hundred and fifty representative women attended.

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#### HART COUNTY

Through the Medical Auxiliary, the Woman's Club of Hartwell, had a Mother Welfare program, with Dr. S. D. Brown addressing the members on cancer. Reports say the audience was spellbound and set the women to thinking! Mrs. J. I. Jenkins is President of the Club and Secretary-Treasurer of the Tenth District. More interesting news is coming next month from this source.

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#### JACKSON COUNTY

Mrs. White and Mrs. Olin Cofer, Fifth District Manager, were guests of Mrs. Ralph Freeman in Hoschton in March and Mrs. White spoke twice at the Woman's Club to a gathering of several organizations, including Braselton visitors. Her first address was on “Mother Welfare Through the Ages,” the second was to the Junior Members “The Girl Beautiful.”

Mrs. White reports the cleverest distribution of educational material she has seen. Mrs. Freeman and Mrs. M. B. Allen secured all available material from the Auxiliary, the Board of Health, Department of Agriculture, in all about fourteen pertinent articles, including Health Teaching plans from Hygeia and rolled them inside a sample copy of Hygeia, tied the Hygeia and placed them in baskets and passed them after a neat talk on their value and use. Why not try this? Mrs. Freeman and Mrs. Allen are very busy with their educational work.

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#### FIFTH DISTRICT

The Fifth District Medical Auxiliary met March 22nd. and had the unusual opportunity of having Dr. Clifford Grulee, Editor of the *American Journal of Diseases of Children*, Head of the Department of Pediatrics at Rush Medical College, and Secretary-Treasurer of the American Academy of Pediatrics, speak to it on “The Significance of the Newborn Child to the Health of the Community.” Mrs. Olin Cofer presided and was official hostess and in charge

of the supper to the Society and Auxiliary, which preceded the meeting.

#### TENTH DISTRICT

The Tenth District Medical Auxiliary met in Augusta. Mrs. D. M. Carter is Manager. Mrs. Peter B. Wright, of Augusta, welcomed the members and Mrs. Paul Holliday, of Athens, responded. Dr. A. W. Simpson, of Washington, addressed the Auxiliary "On the Prevention of Tuberculosis."

"Characteristics Necessary to Make a Good Doctor's Wife," read by each member, proved an interesting feature.

Encouraging reports were read from Richmond, Clarke and Hart Counties. Reports from standing committees showed excellent co-operation with all civic and patriotic organizations for better health.

Mrs. Holliday reported on the Student Loan Fund. Richmond County contributed \$50.00.

Mrs. Philip R. Stewart was elected District Scrap-Book Chairman and Mrs. Holliday, Historian. Mrs. Carter read Mrs. James Blake's letter from the American Medical Bulletin.

#### MUSCOGEE COUNTY

From the Muscogee Council P.-T. A. comes a volunteer report on the health program recommended by us, that material given has been used by the seventeen associations and that the work has been discussed and stressed since presented to the Council last fall. There is no Auxiliary in this county, although we have sought permission for one. Never do we see P.-T. A. members from it, but they ask when there will be an Auxiliary and how much they think it needed.

#### FIRST DISTRICT

The First District Auxiliary met at Statesboro on March 21st. Mrs. Waldo E. Floyd delivered the address of welcome. Mrs. L. F. Lanier, Sylvania, responded to the address of welcome. Mrs. Lee Howard, Savannah, is District Manager.

Mrs. Wm. Shearouse gave a brief talk on social hygiene and distributed reading lists. Dr. Elliott spoke on "Tuberculosis," Dr. Richardson, on "Eugenic Sterilization" and Mr. Guy Wells, President of the Teachers' College at Statesboro, "On the Necessity of a Good Health Program in Education."

#### NINTH DISTRICT MEETING

The Woman's Auxiliary to the Ninth District Medical Society met at Alto March 21, 1934. Mrs. D. H. Garrison, Vice-President, presided.

Cherokee, Pickens, Habersham, Hall, Jackson, Stephens counties reported excellent educational and public relations work.

Mrs. D. Y. Sage, Atlanta; Mrs. B. C. Teasley, Hartwell; Mrs. S. D. Brown, Royston, were visitors and told of work in their Auxiliaries.

A letter was read from Mrs. White who, due to other engagements, was unable to be present. She

called especial attention to securing scrap-book data, and importance of compiling histories.

Dr. C. W. Roberts, Atlanta, spoke most interestingly on "Medicine and the New Deal," and the code of the medical profession, which is several thousand years old. He stressed education of the underprivileged mother.

The Medical Society and Auxiliary enjoyed lunch together.

#### COUNTIES REPORTING FOR 1934

##### *Meriwether County Medical Society*

The Meriwether County Medical Society announces the following officers for 1934:

President—J. L. Jackson, Manchester.  
Vice-President—V. H. Bennett, Gay.  
Secretary-Treasurer—R. B. Gilbert, Greenville.  
Delegate—R. B. Gilbert, Greenville.  
Alternate Delegate—W. P. Kirkland, Manchester.

##### *Walton County Medical Society*

The Walton County Medical Society announces the following officers for 1934:

President—J. B. H. Day, Social Circle.  
Vice-President—T. R. Aycock, Monroe.  
Secretary-Treasurer—W. H. Lott, Monroe.  
Delegate—J. A. Pirkle, Monroe.  
Alternate Delegate—T. R. Aycock, Monroe.

##### *Morgan County Medical Society*

The Morgan County Medical Society announces the following officers for 1934:

President—D. M. Carter, Madison.  
Vice-President—W. M. Fambrough, Bostwick.  
Secretary-Treasurer—W. C. McGeary, Madison.  
Delegate—J. L. Porter, Rutledge.  
Alternate Delegate—W. C. McGeary, Madison.

#### HONOR ROLL FOR 1934

1. Randolph County, Dr. G. Y. Moore\*, Cuthbert, December 12, 1933.
2. Macon County, Dr. Thomas M. Adams, Mon-tezuma, January 13, 1934.
3. Henry County, Dr. H. C. Ellis, McDonough, January 18, 1934.
4. Wayne County, Dr. A. J. Gordon, Jesup, March 12, 1934.
5. Monroe County, Dr. G. H. Alexander, Forsyth, March 19, 1934.
6. Ware County, Dr. Kenneth McCullough, Way-cross, March 19, 1934.
7. Turner County, Dr. J. H. Baxter, Ashburn, March 24, 1934.
8. Lamar County, Dr. J. M. Rogers, Barnesville, April 2, 1934.

\*Deceased.



# GEORGIA DEPARTMENT OF PUBLIC HEALTH

T. F. ABERCROMBIE, M.D., *Director*

## EIGHTY-THREE YEARS OF MORTALITY STATISTICS IN GEORGIA

1860 TO 1933

Beginning with the decennial census of 1850 to 1900, mortality data were collected by the enumerators at the time the population was enumerated. This method of collecting mortality statistics was recognized as far back as 1860 as being unsatisfactory, both as to the number of deaths and causes of deaths. In 1870, a test was made to determine the completeness of enumerated mortality by checking with the registered deaths in several of the New England States. This check revealed that enumerated mortality was between 25 to 30 per cent deficient. Since 1900, the Bureau of the Census has collected and published mortality statistics annually, from data obtained from the registration records of states included in the "Registration Area"—that is, the states having vital statistics laws, the results of whose operation have been accepted as giving practically complete mortality returns. Since the Bureau of Vital Statistics for Georgia was not organized until 1919, there is an interval of nineteen years (from 1900 to 1920) for which there are no mortality records for the state.

Although the enumerated mortality statistics are incomplete, they furnish some in-

teresting information concerning the prevalence and seriousness of the various diseases during the past eight decades, as shown in the accompanying table.

One of the most interesting and significant facts is the uniformity of the general death rates (from all causes) for the decades 1860 to 1900, compared with the corresponding rates of 1920, 1930, and 1933, notwithstanding the unusually high rates recorded for certain epidemic diseases. The combined death rates from tuberculosis, diarrhea, dysentery, enteritis, diphtheria, croup, malaria, and typhoid in 1900 is almost four times greater than the combined rates for these causes in 1933. Although the death rates from epidemics in 1933 show a tremendous decrease compared with 1900, the rate from all causes shows a comparatively slight decrease. The big reduction in epidemic diseases is offset, to a great extent, by the increase in the number of deaths from cancer and the degenerative diseases. However, it represents a great conservation or extension of human life since the preponderance of death from epidemic diseases occur in the early ages. Had the death rates in 1900 from epidemic diseases prevailed in 1933, there would have been 10,556 more deaths from these causes than actually occurred.

*Cancer*—The death rates from cancer show a steady, unbroken increase. In 1933 the rate is 609 per cent higher than the rate recorded in 1860. Some of this increase is, no doubt, due to diagnosis.

DEATH RATES PER 100,000 POPULATION FROM SPECIFIED CAUSES, IN GEORGIA FOR THE DECENNIAL YEARS 1860 TO 1900, 1920 AND 1930, AND THE CALENDAR YEAR 1933.

CAUSE OF DEATH	DEATH RATES PER 100,000 POPULATION							
	1860	1870	1880	1890	1900	1920	1930	1933
ALL CAUSES	1211.9	1149.0	1397.3	1152.4	1219.1	1113.2	1207.4	1031.1
Cancer	7.7	11.1	15.6	16.0	17.3	38.8	53.3	54.6
Bronchitis	6.3	5.9	11.3	4.2	12.4	6.7	3.2	1.7
Cephalitis (Encephalitis)	25.5	23.4	22.8	5.9	6.2	2.2	1.9	2.0
Consumption (Tuberculosis)	52.0	84.1	122.0	126.5	128.1	81.6	74.6	59.1
Diarrhea, Dysentery, Enteritis	100.4	119.4	130.4	128.1	101.1	59.6	46.2	29.8
Diphtheria and Croup	41.6	35.2	84.9	128.1	101.1	13.8	4.6	6.2
Dropsy	57.8	20.9	56.5	32.3	34.3	*	*	*
Heart, Diseases of the	10.6	2.2	37.6	44.1	62.0	65.3	140.6	132.1
Lockjaw (Tetanus)	7.5	2.3	3.9	3.4	2.9	2.8	1.9	1.6
Malaria	53.7	59.5	68.7	51.0	45.8	19.3	15.2	12.1
Measles	4.5	22.8	32.2	24.0	9.1	2.1	4.4	2.1
Pneumonia	119.9	115.1	109.3	94.6	117.6	95.5	88.5	75.9
Puerperal Fever	6.4	6.4	8.7	2.6	3.9	6.7	5.4	3.8
Scarlet Fever	20.5	1.0	2.0	0.4	2.0	1.1	1.3	0.6
Smallpox	.08	1.5	0.1		2.1	0.1		
Typhoid Fever	83.9	65.2	64.0	54.4	71.7	19.0	17.2	8.3
Whooping-Cough	31.6	7.8	42.1	1.6	10.0	12.9	8.8	7.2
*Not Reported								

*Cephalitis (Encephalitis)*—The sharp reduction in the death rates from this cause, beginning in 1890 to 1933, is unquestionably due to correction in classification.

*Heart Diseases*—The death rate from diseases of the heart in 1933 is 1,146 per cent higher than the rate in 1860. Assuming that 95 per cent of dropsy reported in 1860 was due to diseases of the heart, that would make the rate 65.5, which is only 50 per cent lower than the 1933 rate.

*Pneumonia*—The death rate in 1933 shows a reduction over the rate of 1860 of 37 per cent. This reduction is probably due, in large part, to improved medical treatment.

*Smallpox*—In the early history of Georgia, practically all public health legislation was directed towards the control of smallpox. In 1865, the state legislature passed an act to prevent the spread of smallpox, yet the mortality rates from smallpox are negligible in every decade.

#### FIRST DISTRICT MEDICAL SOCIETY MEETING

The mid-winter meeting of the First District Medical Society, with fifty-four members present, was held in the Masonic Hall at Statesboro, on March 21, 1934.

The meeting was called to order by the President, Dr. J. W. Daniel, Claxton, and Invocation by Rev. G. N. Rainey, Pastor of Methodist Church, Statesboro. Address of Welcome by Honorable J. L. Renfro, Mayor of Statesboro.

An interesting scientific program was rendered as follows:

1. *Symposium on Cancer of the Breast.*
  - a. Symptoms and Diagnosis—Lantern slides by Dr. W. H. Myers, Savannah.
  - b. Pathology—Gross and Microscopic with Differential Diagnosis, Dr. Lee Howard, Savannah.
  - c. Radio Therapy, Dr. Robert Drane, Savannah.
2. *Anorexia In Infancy Associated with Pathological Chest Conditions*, Dr. A. J. Waring, Savannah.
3. *Uterine Hemorrhage*, Dr. Lester A. Wilson, Savannah.
4. *Endemic Typhus Fever*, Dr. Walter E. Simmons, Metter.
5. *Rare Type of Fecal Fistula*, Case Report, Dr. George Touchton, Savannah.
6. *Endocervicitis and Its Treatment*, Dr. C. H. Richardson, Macon, President of State Association.
7. *Arthritis*, Dr. Charles T. Brown, Guyton.
8. *Certain Aspects in Pernicious Malaria*, Dr. V. P. Sydenstricker, Augusta.
9. *Diagnosis and Treatment of Early Gallbladder Disease.*

Dr. Allen H. Bunce, Atlanta.

Discussion was general and full of interest.

A delightful luncheon was served at 1:30 P.M. in the Women's Club Room over the Sea Island Bank.

Just preceding the adjournment for luncheon the following resolution was proposed by Dr. R. L. Miller of Waynesboro, who moved its adoption: "Be It Resolved that the First District Medical Society, an integral part of the Medical Association of Georgia, in convention assembled, hereby pledge its fullest cooperation with the Federal Emergency Relief Administration in Georgia to the end that all patients on relief rolls shall receive the very best medical attention possible for us to give.

"We commend the efficient work of Miss Gay B. Shepperson, State Relief Administrator, for her close cooperation with us in giving these patients prompt and adequate medical service. We have experienced only one difficulty and that is in taking care of patients in rural sections, this being largely an agricultural section with many dependent tenants, farmers and laborers.

"Be It Resolved that a copy of this be sent to Miss Gay B. Shepperson, the press, and a copy spread on the minutes of this meeting."

Motion was seconded by Dr. Mooney of Statesboro and passed.

As Dr. Myers could not be present and as Dr. Drane could not show the motion pictures on Radio Therapy, it was moved by Dr. Cleveland Thompson, Millen, that the Cancer Symposium be included in the program for the mid-summer meeting. Motion was carried.

It was then moved by Dr. Quattlebaum that a rising vote of thanks be given the Statesboro members and the ladies for their hospitality and delicious luncheon.

The rising vote was immediately given and with alacrity. Meeting adjourned.

Respectfully,

Savannah.

J. L. ELLIOTT, M.D., Sec'y.

#### SIXTH DISTRICT MEDICAL SOCIETY MEETING

The regular winter meeting of the Sixth District Medical Society was held in the Nurses' Home of the Georgia State Sanitarium at Milledgeville on December 6, 1933. The meeting was called to order by the President Dr. S. T. R. Revell. The Invocation was by Reverend A. G. Harris, Pastor of the Presbyterian Church. Members and visitors were welcomed by Dr. R. C. Swint.

The scientific program was as follows:

1. *Hodgkin's Disease*—Dr. William M. Cason, Sandersville. A thorough survey of this subject from every angle was given, concluded with a case report. Dr. C. C. Harrold discussed the difficulty encountered in differentiating the various lymphoblastomata. Dr. Thomas Harrold discussed the use of deep x-ray therapy. Dr. Hinton and Dr. Chrisman cited illustrative cases.



2. *Fracture Clinic*—Dr. Richard Binion, Milledgeville. The following cases were presented and discussed: (1) Fracture of the humerus; (2) broken back with transient symptoms of cord compression; (3) fracture of leg with much bone loss. In discussing these cases Dr. O. H. Weaver stated that a complete paraplegia from spine fracture warranted a bad prognosis. Dr. Thomas Harrold cited the bad results from an extension splint improperly applied. Dr. H. D. Allen discussed the question of non-union. Dr. Newman mentioned the stimulation of union by slight motion. He also discussed the use of proper splints.

3. *Uses and Limitation of Salyrgan and Novasurol*—Dr. W. W. Chrisman, Macon.

The introduction and clinical usefulness of these two drugs were discussed by Dr. Chrisman with reasons for his preference for salyrgan. Dr. Atkinson mentioned the danger from these and other diuretic drugs in acute nephritis. Dr. Rogers emphasized the importance of ammonium chloride with these drugs. Dr. Revell cited a case illustrating very striking benefit from the use of salyrgan.

4. *Psychiatric Clinic*—Dr. Y. H. Yarborough, Milledgeville.

Dr. Yarborough gave a most interesting and instructive presentation of the Post-Encephalitic Syndrome. He showed cases illustrating all of the various stages of this condition and emphasized the importance of recognizing the mental symptoms early before the neurological symptoms become evident. In this connection Dr. Ridley and Dr. Richardson praised very highly the work which Dr. Yarborough had been doing in Macon. A resolution in regard to this matter was passed later as stated below.

At this point the scientific program was interrupted and a delightful luncheon served at Hotel Baldwin.

5. *Birth Injuries*—Dr. Benjamin Bashinski, Macon.

This paper surveyed the genesis symptomatology and treatment of birth injuries from the standpoint of the pediatrician. Dr. O. R. Thompson discussed the prevention of birth injuries from the obstetrical viewpoint.

A telegram was read from Dr. Samuel C. Ketchin of Louisville, stating that he was ill and therefore unable to read his paper, *The Medical Aspects of the Acute Abdomen*, as scheduled.

6. *The Acute Abdomen from the Surgical Standpoint*—Dr. F. B. Rawlings, Sandersville.

After a motion to permit it was unanimously adopted, this paper was read by Dr. Owensby; Dr. Rawlings having been unexpectedly prevented from attending the meeting. The paper covered thoroughly the symptomatology of acute abdominal conditions with a consideration of the underlying pathology and surgical measures indicated. Dr. Massenburg discussed this paper, emphasizing the advisability of operation if the presence of an acute abdominal condition could not be rather definitely ruled out.

The following case was reported by Dr. Sam A. Anderson of Milledgeville:

A woman, aged forty-six, had an optic atrophy ten years ago. There was apparent improvement after removal of tonsils and use of autogenous vaccine. One year ago she complained of choking when she ate meats. There was some enlargement of the thyroid and a small lump was found in the right breast. There were no palpable lymph glands. A study in Atlanta showed an increased metabolic rate and a shadow at the clavicular-sternal articulation. The right breast was amputated and the mass found to be carcinoma. Involvement of the glands of the left side of the neck, then of the left breast, and of the generalized skin area followed in rapid succession. The tissues and cavities became water-logged and the patient died.

Dr. C. H. Richardson, President of the Medical Association of Georgia, urged that a number of men in this district offer papers for the Association meeting to be held at Augusta in May.

Dr. H. G. Weaver, speaking as District Councilor, discussed the present status of the medical aspect of government emergency relief work in Georgia.

The minutes of the previous meeting were read and approved. The financial report was submitted and accepted. The secretary-treasurer offered his resignation but agreed to withdraw it at the request of the president. Resolution was introduced by Dr. Ridley, seconded, and passed, that this society go on record as heartily indorsing the work which Dr. Y. H. Yarborough has been conducting in Macon; and that the secretary be instructed to write to the Governor urging, on behalf of this society, the continuance of Dr. Yarborough's work in Macon.

Invitations were extended from Macon and from Louisville for the summer meeting. It was decided that the next meeting would be held in Louisville, on June 27, 1934.

H. C. ATKINSON, M.D.,  
Macon, Ga. *Secretary.*

#### NEWS ITEMS

The Wilcox County Medical Society met in the school library at Hawkinsville on February 22nd.

The Carroll County Medical Society met at the Carrollton Clinic on March 1. Guest speakers were Dr. Ed. H. Greene and Dr. T. P. Goodwyn, both of Atlanta; Dr. K. S. Hunt, Griffin, and Dr. M. M. Head, Zebulon. Dinner was served in the dining room of the Clinic.

The staff meeting of the Wesley Memorial Hospital, Emory University, was held in the dining room on March 9. Dr. C. W. Strickler, Atlanta, discussed, *Raynaud's Disease, Chronic Glomerulonephritis, Acute Purulent Pericarditis*. Dr. Carter Smith, Atlanta, *Septicemia, Bacterial Endocarditis*. Dr. R. A. Bar-

tholomew, Atlanta, *Toxemia of Pregnancy, Eclampsia*. Dr. Dan C. Elkin, Atlanta, *X-Ray Demonstration, Pleurobronchial Fistula*. Dinner was served.

The staff meeting of the Crawford W. Long Memorial Hospital, Atlanta, was held in the dining room of the hospital on March 8. The clinical program consisted of case reports on *Ascites, Thoracic Aneurysm with Hematemesis and Melena, Pneumonia with a Leukopenia*. The discussion was led by Dr. R. T. Dorsey, Atlanta.

The Georgia Medical Society met on March 13. Dr. L. M. Freedman, Savannah, read a paper entitled, *Carcinoma of the Cervix*; Dr. T. P. Waring and Dr. Robert Drane, Savannah, led the discussion. Dr. Lee Howard, Savannah, reported a case, *Bacterial Findings in Recent Ear and Throat Infections*.

Dr. Thomas A. Hurley, Macon, has been elected Bibb County Commissioner of Health.

The Jackson-Barrow Counties Medical Society met at the Harrison House, Jefferson, on March 5. Dr. C. B. Almand, Winder, read a paper entitled, *Cholecystitis*.

The Lowndes County Medical Society held a called meeting at the Hotel Daniel Ashley, Valdosta, on March 7. Miss Opal Futch, Lowndes County Civil Works Administrator, spoke on the C. W. A. as it affects the profession of medicine in this city and community.

The Meriwether County Medical Society met at the office of Dr. T. W. Jackson, Manchester, on March 5. After the meeting a chicken supper was served at the Manchester Hotel.

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, March 15. Dr. B. McH. Cline, gave a case report entitled, *Removal of Unusual Benign Growth in Laryngopharynx*; Dr. Floyd W. McRae, Atlanta, *Exhibited An Old Instrument Set*; Dr. A. Worth Hobby, Atlanta, read a paper, *Gastro-Intestinal Complications in Pulmonary Tuberculosis—Review of 200 Cases*. The discussions were led by Dr. Trimble Johnson, Dr. C. C. Aven and Dr. L. G. Parham, all of Atlanta.

The Muscogee County Medical Society met at the Columbus City Hospital, Columbus, on March 8. Dr. W. P. Jordan read a paper entitled, *Individual Versus Group Clinic Treatment of Communicable Disease*. It was announced that the Medical Credit Bureau which has been under discussion and in process of organization for several months will begin to function within a few weeks.

The Ninth District Medical Society met at Alto

on March 21. Dr. F. C. Whelchel, Alto, read a paper entitled, *Indication for Artificial Collapse Therapy—Exhibition of Unusual Cases*; Dr. M. B. Allen, Hoschton, led the discussion. Dr. H. E. Crow, Alto, *Application of Artificial Pneumothorax for the Treatment*; Dr. H. D. Garrison, Tate, led the discussion. Dr. Kellie N. Joseph, Alto, *The Place of Phrenic Nerve Avulsion in the Treatment of Pulmonary Diseases—X-Ray Film Demonstration*; Dr. C. D. Whelchel, Gainesville, led the discussion. Addresses by Dr. Clarence L. Ayers, Toccoa, and Dr. Chas. H. Richardson, Macon, President-Elect and President of the Association, respectively.

The Grady Hospital (Atlanta) staff meeting was held on March 13. Dr. Jack C. Norris made Mortality and Morbidity Reports; Dr. J. G. Riley reported a case of Ruptured Spleen. Pathological Specimens were exhibited.

The Fifth District Medical Society met at the Academy of Medicine, Atlanta, on March 22. Dr. Edgar G. Ballenger, Atlanta, read a paper entitled, *The Relationship of Health Preservation to Genito-Urinary Symptoms*; Dr. Samuel J. Sinkoe, Atlanta, led the discussion. Dr. Louis C. Rouglin, Atlanta, *Nasal Accessory Sinuses as Foci of Infection*; Dr. Wm. C. Warren, Jr., Atlanta, led the discussion. Dr. Clifford G. Grulee, Chicago, *Breast Feeding and Infection—A Review of 20,000 Cases*; introduced by Dr. Wm. A. Mulherin, Augusta; Dr. L. D. Hoppe, Atlanta, led the discussion. Dr. Barney Brooks, Nashville, Tenn., *The Influence of Simultaneous Ligation of the Veins on the Incidence of Gangrene Following Arterial Obstruction*; introduced by Dr. Dan C. Elkin, Atlanta; Dr. Joseph C. Read, Atlanta, led the discussion. The members of the Academy of Pediatrics gave a luncheon in honor of Dr. Grulee at the Capital City Club at 12:30 P.M.

The Thomas County Medical Society held its quarterly meeting on March 21. Dr. J. I. Palmer, Thomasville, read a paper entitled, *Tetany-like Symptoms In the Newborn*; Dr. E. F. Wahl, Thomasville, *Neurology In General Practice*; Dr. C. K. Wall, Thomasville, *Transurethral Resection of the Prostate*. Dinner was served by members of the Woman's Auxiliary at the American Legion Home.

The Emanuel County Medical Society held its March meeting at The Southern Pine, Swainsboro. The scientific meeting consisted of a health program. The guest speakers were Dr. Cleveland Thompson and Dr. G. G. Lunsford, both of Millen.

The members of the Lowndes County Medical Society and the dentists of the county were entertained at Brown's Pond by Dr. T. Conrad Williams and L. C. Holzendorf, D.D.S., Valdosta, on March 15.

Dr. Frank K. Boland, Atlanta, President of the



Southern Surgical Association, spent March 14 at Sea Island Beach completing plans for the Association meeting to be held there in December.

The Georgia Medical Society met on March 27. Dr. J. W. Daniel, Jr., Savannah, read a paper entitled, *Carbohydrate Metabolism*; Dr. T. J. Charlton, Savannah, led the discussion. Dr. Julian K. Quattlebaum, Savannah, gave a case report entitled, *Solitary Bone Cyst*. Refreshments were served.

The Fulton County Medical Relief Association met at the Academy of Medicine, Atlanta, on March 20. Dr. C. W. Roberts was elected President; Dr. Edgar Boling, Vice-President; Dr. Major F. Fowler, Secretary-Treasurer; Dr. C. W. Strickler, Chairman of the Board of Directors. Other members of the Board are Dr. Edgar G. Ballenger, Dr. B. T. Beasley, Dr. Lewis M. Gaines, and Dr. Ed. H. Greene.

The Richmond County Medical Society met at the University Hospital, Augusta, on March 22. Dr. Samuel G. Gant, New York City, spoke on *Surgical Treatment of Diarrhea and Constipation*; Dr. Wm. W. Babson, U. S. Veterans' Hospital, No. 62, Augusta, spoke on the *Treatment of War Neuroses*.

The Parent-Teacher Association of Clarke county sponsored a "Mother Welfare" program on March 16 at Mell Auditorium, Athens. Dr. Guy O. Whelchel, Athens, made the introductory talk; Dr. H. M. Fullilove, Athens, spoke on the *Symptoms of Cancer in Women*; Dr. Weyman Davis, Athens, discussed *Treatment of Cancer*; Dr. Paul L. Holliday, Athens, addressed the members on, *Prevention of Cancer from Childbirth*.

The American College of Physicians will hold its eighteenth annual clinical session at the Palmer House, Chicago, April 16-20. Dr. Roy R. Kracke and Dr. Stewart R. Roberts, Atlanta, appear on the program with a paper entitled, *Further Studies on Granulopenia with Report of Fifteen Additional Cases*. Dr. Russell H. Oppenheimer, Emory University, is a member of the Board of Governors.

The staff meeting of St. Joseph Infirmary, Atlanta, was held on March 27.

The Ware County Medical Society met in the Woman's Club room at Homerville on April 4. Dr. H. G. Huey, Homerville, read a paper entitled, *The Treatment of Asthma with Diathermy—Report of Cases*. Dr. Huey entertained the members of the Society at supper.

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, on April 5. Dr. W. W. Blackman gave a case report, *Acute Gout*; Dr. Frank K. Boland, *Paget's Disease of the Nipple—*

*Case Report*; Dr. John Funke, clinical talk, *The Increased Metabolic Rate Due to the Effect of Intestinal Intoxication on the Thyroid Gland*; Dr. Montague L. Boyd read a paper entitled, *Anatomy of Prostatic Hypertrophy and Resection of the Prostate Through the Urethra*. Dr. E. G. Ballenger, Dr. M. K. Bailey and Major F. Fowler led the discussions.

The Randolph County Medical Society met at the Patterson Hospital, Cuthbert, on April 5. Memorial services were held for Dr. A. L. Crittenden, deceased.

The Seventh District Medical Society met at Dalton on April 4. Titles of scientific papers on the program were as follows: *Acute Inflammation of the Middle Ear*, by Dr. H. J. Ault, Dalton; *Thrombocytopenic Purpura—Case Report*, Dr. Lester Harbn, Rome; *Prolapsus of the Bowel Through a Patent Omphalomesenteric Duct*, Dr. Trammell Starr, Dalton; *A Study of the Effect of Certain Diseased Conditions on Sleep*, Dr. Glenville Giddings, Atlanta; *The Diagnosis and Treatment of Ocular Tuberculosis*, Dr. G. B. Smith, Rome; *The Etiology of Multiple Pregnancy and Experiences in the Delivery of Pleural Births*, Dr. Henry L. Sams, Dalton; *Blood Pressure*, Dr. P. O. Chaudron, Cedartown.

The Burke-Jenkins-Screven Counties Medical Societies met at the Wayside Hotel, Millen, on April 5. Dr. H. F. Bent, Midville, gave a case report on, *Post Measles Pneumonia*; Dr. C. Thompson, Millen, case report, *Rheumatic Heart in a 14-Year-Old Child with a Previous History of Growing Pains*; Dr. L. F. Lanier, Sylvania, case report, *Acute Cerebrospinal Meningitis*; Dr. G. G. Lunsford, Millen, *Report of a Tuberculosis Carrier from Which There Had Been 17 Known Deaths*; Dr. Kenneth McCullough, Waycross, discussed, *The Complications of Acute Appendicitis*. Memorial services were held for Dr. M. E. Perkins, deceased, former President of the Jenkins County Medical Society.

The Georgia Medical Society met on April 10. Dr. H. F. Sharpley, Jr., Savannah, read a paper entitled, *Results and Experiences with 100 Aschheim-Zondek Tests*; discussion was led by Dr. Lawrence Lee and Dr. C. F. Holton, both of Savannah. Dr. H. F. Sharpley and Dr. B. J. Bond, Savannah, gave a case report, *Foetus Amorphus*. Dr. G. H. Faggart, Savannah, case report, *Brain Abscess*.

The Eighth District Medical Society met at Douglas on April 10th. Dr. W. L. Pomery, Waycross, read a paper entitled, *Encephalitis Complicating Measles*; Dr. L. W. Pierce, Brunswick, *Urinary Calculus*; Dr. B. G. Owens, Valdosta, *Extra Uterine Pregnancy*; Dr. C. A. Witmer, Waycross, *Prevention and Management of Birth Canal Injuries*; Dr. W. F. Reavis, Waycross, *The Chronic Prostate*; Dr. R. R. Killinger, Jacksonville, Fla., *First Aid to Injured*.

## OBITUARY

*Dr. Willis B. Jones*, Atlanta; member; Columbia University College of Physicians and Surgeons, New York City, 1901; aged 59; died in a hospital at Baltimore, Maryland, following an operation on March 3, 1934. He was born and reared in Newnan, Coweta county. Dr. Jones studied at Mercer University, Macon, later attended the University of Georgia from which he graduated. After graduating in medicine, he served as an intern at Bellevue Hospital, N. Y., took postgraduate work in surgery in Europe, then began practice in Atlanta. Dr. Jones was one of the leading surgeons of the southeast. He was held in high esteem by members of the medical profession and had hundreds of friends among the more unfortunate people for whom he did charity practice in Atlanta and Fulton county. Dr. Jones was on the staffs of the Crawford W. Long Memorial Hospital, Georgia Baptist Hospital, Grady Hospital, and the Wesley Memorial Hospital. He was a member of the Piedmont Driving Club, Capital City Club, Fulton County Medical Society, Masonic lodge, and All Saints Episcopal church. Surviving him are his widow and three sons, Willis B. Jones, Jr., a student at the University of Virginia; Charles Jones at Woodbury Forrest School, and Bryant Jones, who is in school in Atlanta. Funeral services were conducted from the residence, 1753 Peachtree Street, N.E., by Bishop H. J. Mikell. Burial was in Oakland cemetery. Members of the Fulton County Medical Society acted as an honorary escort.

*Dr. Marvin Sumter Witt*, Manchester; member; Emory University School of Medicine, Emory University, 1914; aged 48; died on March 3, 1934, in an Atlanta hospital. After graduating in medicine, he practiced in Woodland for about seven years then moved to Manchester where he practiced until his last illness. Dr. Witt was an excellent physician and an amiable citizen. He enjoyed the confidence and esteem of many acquaintances. Dr. Witt was a member of the Meriwether County Medical Society and the Fourth District Medical Society. Surviving him are his widow; his mother, Mrs. L. M. Witt, Lake City, Fla.; four brothers, Dr. C. C. Witt, Arcadia, Fla.; Colonel Matthew Witt, Dr. T. W. Witt, and Edwin Witt, all of Lake City, Fla. Funeral services were conducted from the residence. Interment was in Woodland cemetery.

*Dr. Emmett Leon Norton*, Newton; Atlanta School of Medicine, Atlanta, 1906; aged 48; died suddenly of heart disease on February 24, 1934. He practiced medicine in Amsterdam and Attapulugus, later moved to Newton where he practiced for a number of years. His quiet disposition and pleasing personality endeared him to many acquaintances. Surviving him are his father, two brothers and three sisters. Funeral services were conducted at the graveside by Rev. T. E. Murray, Pastor of the Newton Methodist church. Burial was in the Newton cemetery.

*Dr. William Elzie Tyson*, Chula; Chattanooga Medical College, Chattanooga, Tenn., 1908; aged 56; died suddenly of apoplexy at his home on March 6, 1934. He began the practice of medicine at Chula immediately after receiving his degree in medicine and had an extensive practice in Irwin, Tift, Turner and Worth counties. Dr. Tyson was a congenial and likable gentleman and had numerous friends throughout that section. Surviving him are his widow; three daughters, Vachel D., Elza and Doris Tyson; and three sons, W. E., Jr., Raleigh M., and Donald Tyson, all of Chula. Funeral services were conducted from the Chula Methodist church by Rev. J. W. Tyson and Elder W. C. Kicklighter. Interment was in Hickory Spring cemetery.

*Dr. Charles Ross Bullock*, Atlanta; Southern Medical College, Atlanta, 1907; aged 51; died at a private hospital in Atlanta of heart disease on March 24, 1934. He was a native of Dallas, Georgia. Dr. Bullock served as major in the medical corps of the United States Army during the World war. After retiring as an officer in the U. S. Army in 1929, he became associated with the city of Atlanta health department and continued his services in this capacity until his death. Dr. Bullock was a Mason, Shriner and a member of the Presbyterian church. Surviving him are one son, Charles C. Bullock; two daughters, Mary Louise and Julia Jeanette Bullock. Funeral services were conducted from the H. M. Patterson Funeral Home by Rev. F. C. Talmadge and Rev. H. H. Shirley. Burial was in Crest Lawn cemetery.

## BOOK REVIEW

*Rose and Carless' Manual of Surgery*. Edited by W. T. Coughlin, B.S., M.D., F.A.C.S., Professor of Surgery and Director, Department of Surgery, St. Louis University School of Medicine; Surgeon-in-Chief, St. Mary's Group of Hospitals, St. Louis, Mo. American fourteenth edition, revised, Pp. 1418, with 676 illustrations and 24 plates, 16 colored. Price, \$9.00. William Wood & Company, division of Williams & Wilkins Company, Baltimore.

The present status of surgery, both thoroughly and concisely presented. In this surgical manual there is no compilation of voluminous treatises of surgical conditions. The diseases are briefly described and accepted methods of treatment stated. The treatment of malignancies with radium has been standardized and the surgery of the sympathetic nervous system has been brought up to date. In this fourteenth edition the chapter on Thoracic Surgery has been completely re-written. Bohler's methods of treating fractures has been described in detail as the results fully justify his excellent mode of treatment. Spinal analgesia is accorded its rightful place in anesthesia. The injection treatment of varicose veins is described and operative procedures practiced extensively in the past are branded obsolete. Tannic acid is conceded pre-eminence in the treatment of burns. The value of injecting hemor-



rhoids is recognized. Sections on the eye, ear, gynecology have been omitted from this American edition. The book is praiseworthy for its technical achievements—binding, paper, illustrations, arrangement, etc.—so typical of English publications.

EDGAR BOLING, M.D.

#### COMMUNICATIONS

#### UNIVERSITY OF GEORGIA SCHOOL OF MEDICINE NEW OUT-PATIENT DEPARTMENT BUILDING

*To the Editor:*

At the annual meeting of the Alumni Association in Macon, May, 1933, the members present unanimously passed a resolution offering the use of the Centennial Memorial Building Fund to the Board of Regents for the erection of an out-patient department and contagious disease building.

Plans and specifications of the proposed building are completed and we are ready to advertise for bids. Funds from the Federal Government, City and county will augment the amount to be used in constructing the building. We presume that you will approve this project, which is absolutely essential to the life of the School of Medicine at this time.

Because of the delay in adding this building to our equipment (unavoidable as it was), the Council on Medical Education and Hospitals of the American Medical Association has removed our institution from the list of approved colleges. Erection of the building will satisfy the three principal criticisms of the Council, to wit, the necessity for a new and up-to-date out-patient department, the need for a contagious disease ward in connection with the hospital, and incidentally the latter will add thirty-two beds to the University Hospital, thus taking care of the third principal criticism.

Within a few weeks it will be decided whether to continue the School of Medicine and meet the demands for improvement laid down by the Council. Without this building program the situation is hopeless. This letter is written to acquaint you, as a contributor to the building fund, with the exact status of affairs. If we decide we can meet the exigencies of the situation, we shall go ahead immediately with the erection of the building.

Thanking you for your aid in raising this fund and assured that you will want everything possible done to save the rating of the school, I am

G. LOMBARD KELLY, M.D.

*Acting Dean of the University  
of Georgia School of Medicine.*

Augusta, Ga.

March 5, 1934.

#### STATE TUBERCULOSIS SANATORIUM

*To the Editor:*

I have just received my 1934 membership card in the Medical Association of Georgia, and have read with interest *Radio Waves*, sixth edition.

I am much impressed with the waves set in motion by Dr. Everett A. Bancker as follows: "Use artificial pneumothorax more often in pulmonary tuberculosis. There are no important contraindications." During the past year, as you will recall, our doors have stood ajar for the welcoming of any of our professional associates in this state who wish to refine their technic of pneumothorax and the methods of application of other collapse measures recognized as being of value in the treatment of pulmonary tuberculosis.

We were very much gratified that about 25 physicians among the most prominent of the state honored us with their presence. Judging from letters we have received in return from these physicians and also the amount of collapse work they have been doing, this enterprise has been of tremendous worth. I wish also to remind you that the development of this enterprise was very largely stimulated by yourself as the continuing leader in this state of organized medicine.

I wish to congratulate you for giving us the real inspiration to go forward with such a program. Incidentally, collapse measures as applied in the State Tuberculosis Sanatorium have proven to be of tremendous worth. This is reflected in a most striking manner in the reduction of the fatality rate of the patients under treatment at the Sanatorium. Over a five year period we find that before a significant amount of pneumothorax and other collapse work was being done the fatality was slightly below 12 per 100 patients discharged. During the years 1932 and 1933, when a large per cent of the cases of adult tuberculosis were receiving this type of treatment, the fatality rate has dropped to only slightly above 5—in other words, an approximate 55 per cent reduction in deaths.

At the present time approximately 72 per cent of our patients suffering from adult type tuberculosis are under compression treatment. During the year of 1934 we have resolved to be of more value to the practicing physician. It is my belief that many of the patients suitable for this type of treatment could have collapse established at the Sanatorium and in a short period of time return to their physicians for refills and such type of after care as is indicated. This would shorten the period of stay at the Sanatorium; make it possible for us to handle a much larger number of patients during a given period and would, I think, serve the medical profession in a most gratifying way. Incidentally, the reduction in the fatality rate, which I have mentioned above is, I believe, entirely practical of accomplishments in private practice.

I wish to assure you and the other members of the Medical Association of Georgia that our staff stands ready to serve you in any way it possibly can.

M. F. HAYGOOD, M.D.,

*Superintendent.*

Alto, Georgia.

February 16, 1934.

### MILEAGE NOT APPROVED BY THE CIVIL WORKS ADMINISTRATION

Miss Gay B. Shepperson,  
Georgia Civil Works Administrator,  
Atlanta, Georgia.

Dear Madam:

We wish to thank you for your telegram of March 22nd and letter of confirmation amplifying the information contained therein.

However, please be advised that the members of the Turner County Medical Society refuse to perform further work under the C. W. A., except as necessary to complete professional obligations to patients now under treatment, until officially advised that mileage at 15 cents per mile or more each way will be paid for services rendered in the homes of patients residing over two miles distant from the office of physician assigned to the case.

Other factors prompting this action are the critical and uncompromising attitude of your local administrator toward the medical profession and the conviction that of all individuals or agencies contributing to the successful prosecution of your relief work the medical profession alone is forced to continue in the role of charitable benefactors.

Very respectfully yours,

J. H. BAXTER, M.D.

Ashburn, Georgia.

Secretary-Treasurer,

March 24, 1934. Turner County Medical Society.

### BOOKS RECEIVED

*Allergy In General Practice* by Samuel M. Feinberg, M.D., Assistant Professor of Medicine and Attending Physician in Asthma and Hay Fever Clinic, Northwestern University Medical School; Professor of Medicine in the Cook County Graduate School of Medicine; Attending Physician Cook County Hospital, Chicago. Contains 339 pages, illustrated with 23 engravings and a colored plate. Publishers: Lea & Febiger, Washington Square, Philadelphia. Price \$4.50.

*External Diseases of the Eye* by Donald T. Atkinson, M.D., Consulting Ophthalmologist to the Santa Rosa Infirmary and the Nix Hospital, San Antonio, Texas; Fellow of the Academy of Ophthalmology and Oto-Laryngology; life member of the American Medical Association of Vienna. Contains 704 pages with 479 engravings. Publishers: Lea & Febiger, Washington Square, Philadelphia. Price \$7.50.

*The Management of Fractures, Dislocations, and Sprains* By John Albert Key, M.D., Clinical Professor of Orthopedic Surgery, Washington University School of Medicine; Associate Surgeon, Barnes, Children's, and Jewish Hospitals, St. Louis, Mo., and H. Earl Conwell, M.D., Orthopedic Surgeon for the Tennessee Coal, Iron and Railroad Company, Birmingham, Ala.; Orthopedic Chief of the Traumatic and Orthopedic Services of the Employees' Hospital, Fairfield, Ala.; Member of the Fracture Committee

of the American College of Surgeons, and the Advisory Editorial Staff of the Journal of Bone and Joint Surgery. Contains 1164 pages with 1165 illustrations. Publishers: The C. V. Mosby Company, 3523-3525 Pine Boulevard, St. Louis, Mo.

### CLINICAL SIGNIFICANCE OF ROENTGENOMETRY IN OBSTETRICS

Herbert Thoms, New Haven, Conn. (Journal A. M. A., Feb. 24, 1934), mentions the importance of roentgen methods, as applied to clinical obstetrics, in the diagnosis of fetal position, the presence of fetal abnormalities, the presence of multiple pregnancy and perhaps more especially in the diagnosis of a rachitic deformity of the sacrum. Recent knowledge of the wide incidence of the android and the anthropoid type of pelvis in otherwise "normal" individuals makes a knowledge of these conditions imperative for the practice of scientific obstetrics. The author believes that sensitized paper should be used instead of a celluloid film. This technic, together with the ability of making pelvigrams of several patients at one appointment, has reduced the cost of the procedure to a real working basis for ward patients. That roentgen pelvimetry has not been more generally employed is probably due to the fact that: 1. The majority of women will be delivered spontaneously whether or not pelvic measurements are made. 2. The medical profession does not readily adopt suggested changes in an established routine. 3. The adoption of new diagnostic methods often increases the patient's expense. 4. The present methods of estimating the degree of disproportion, although entirely speculative, are apparently satisfactory in many cases. 5. In the majority of instances, roentgen pelvimetry cannot be performed by the obstetrician himself but requires the assistance of a roentgenologist. 6. The great value of roentgenometric diagnosis is generally unappreciated.

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## SYMPOSIUM ON UROLOGY

### CHRONIC PROSTATITIS\*

HARRY Y. RIGHTON, M.D.  
*Savannah*

Urologists probably are consulted more for the treatment of chronic prostatitis than any other urological disturbance, other than gonorrheal urethritis, and it is interesting to learn the marked difference that exists in the views of this malady. Your experience with transient patients with prostatitis will justify criticism for our varied opinions as to treatment.

We understand chronic prostatitis to be a chronic pyogenic infection of the prostate, having its origin in direct extension from the urethra or by invasion through the blood stream.

Some authorities contend approximately 40 per cent of these cases are hematogenous in origin, claiming tonsillar and dental infection responsible for many of them. The remaining 60 per cent will give history of pre-existing gonorrheal and non-specific urethritis. According to Young's urology, however, hemogenic infections are possible, but not definitely proved.

Prostatitis is perhaps the most important complication of gonorrhea, for the reason that the gonococcus with all its qualities unimpaired, may be retained in the gland without its presence being suspected.

As to the question of how long they may reside in the gland, some claim two and more years; Nothaft says one and one half years is the limit. My experience is that this is most exceptional, as these organisms are early and most frequently supplanted by secondary

invaders, chiefly the staphylococcus, streptococcus and colon bacillus.

In a series of 100 cases collected at Brady Institute for bacteriologic study, organisms were recovered upon culture in 70 per cent, forty of this number being found in smears. Frequently the prostatic secretion is sterile with infected urine but only one case showed sterile urine when growth was obtained from prostatic secretion.

The predisposing cause to infection is congestion of the gland, which is occasioned by ungratified sexual excitement, excessive coitus, masturbation, hemorrhoids, habitual constipation, and irritating conditions of the urine.

Diagnosis cannot be definitely established by the character of the prostate, determined through rectal examination. To the palpating finger the gland may appear enlarged, diminished in size, or the consistency less uniform; either of which conditions may be present without any inflammatory condition.

Again we have frequently encountered cases where the gland was small and normal in every respect to the finger, yet infection of a severe form was present.

The inflammatory foci within the prostate may become encapsulated by scar tissue which result in nodule formation. That may be confused with prostatic calculus.

Diagnosis of chronic prostatitis must depend chiefly upon microscopical examination of prostatic secretion, expressed by massaging, collecting it at the meatus or recovering it by centrifuge from fluid voided after massage. I wish to emphasize the importance of making more than one massage where prostatic infection may be suspected before declaring the prostate free of pus.

Symptoms are usually classified as urinary, sexual and referred. It is not uncommon for

\*Read before the semi-annual meeting of the Georgia Urological Association, Savannah, October 26, 1933.

prostatitis to exist without giving rise to any symptoms.

The prostatic inflammation may extend to the urethra creating urinary symptoms such as burning, frequency, urgency, and a history of early morning discharge. The urine may contain microscopic pus or pus in the form of shots and shreds, or may be absolutely free of pus.

The urinary stream may be reduced in force with possibly some difficulty in starting. Also the presence of residual urine may be detected.

The sexual group includes those complaining of impotence, premature ejaculation in coitus, painful orgasm or frequent nocturnal emission.

The referred symptoms are produced by reflex nerve impulses or more direct by impingement of sensory nerves in scar tissue. Nerve fibers ending in the structure arise from the 10th dorsal to the 3rd sacral segments of the cord, so it is possible for prostatic pain to be referred to regions innervated by any of the corresponding nerves. The most common region in which pain is manifested is the lower back, perineum, rectum, and hips.

In beginning treatment, it is quite important to secure the confidence of the patient. Explaining response to treatment will be slow, possibly extending over periods of months.

It is necessary to acquaint the patient with the importance of continuing treatment until the gland is pus free, as it will obviate the possibility of certain sexual disturbances. Otherwise, the tendency will be in many instances to discontinue treatment before symptoms subside, which, in my experience, is largely responsible for impotence in young men.

The patient should be impressed with hygienic rules essential to improving his general condition. There should be no objection to occasional indulgence in coitus as long as the patient is improving, but certainly it should not be permitted to post-gonorrheal infection.

Unquestionably the most valuable single treatment is properly applied digital massage

at proper intervals. Too frequent and too vigorous massage is certain to be harmful.

Gentleness should be applied to every operation of urology, and particularly in massaging the patient just beginning treatment. Some you cannot hurt but once, simply because they don't come back.

Massaging the non-specific prostate once weekly will usually give good results, whereas the subacute and post-gonorrheal may be massaged three times a week with benefit.

Massaging should be continued as long as symptoms are improving, otherwise, after a period of six or eight weeks of continuous massaging, I would advocate rest from all treatment. In some cases, upon their return we find the gland free from pus, if not, we advise another round of treatment.

Urine or fluid should be in the bladder during massage. In the majority of cases where the urine is free from infection, I fail to appreciate any indication for medicated solutions in the bladder.

Irrigations and instillations are of value when post-urethritis is present, and regardless of what medicinal agent is employed, it will be of little benefit if followed by much irritation.

My experience is that patients who complain of decided irritation following the last treatment, will usually, on his return, have more pus in the secretion, which may be explained by an increase of congestion of prostatic ducts, thus affecting drainage.

Urinary antiseptics are only indicated when the urine is infected.

Hot sitz baths certainly relieve urinary symptoms and hasten resolution. My conclusion is drawn by comparison with the patient employing hot sitz baths and those unable to include it as part of their treatment.

Heat applied by certain devices of diathermy has been of benefit in properly selected cases.

Vaccine have many advocates, but I believe they have little or no value.

There are two types of prostatitis, which offer perhaps our greatest problem: The cystic, with or without organisms, and the colon bacillus infection.

Grant, of Louisville, advocates the injec-



tion of mercurochrome, one to two cc. of 1 per cent solution, into the prostate with 22 gauge needle through perineum accompanied by a gentle massage to disseminate the drug. His first experience was with chronic prostatitis only, reporting 100 cases. Since then he has injected all types of infected glands, treating over 400 cases without a single untoward effect. Not all cases were improved, but the proportion of cures, both from a chemical and laboratory standpoint, has been high.

I have had little experience with bacteriophage, having employed it in but a single case, but with gratifying results.

In concluding, I wish to offer two case reports.

Case 1. A bookkeeper, age 40, married, consulted me for albuminuria, which was detected by a medical insurance examiner. He passed a satisfactory examination for insurance a year before. Urinalysis showed a trace of albumin, no sugar, an occasional pus cell—Sp. gr. 1022. The prostate was not enlarged, though slightly boggy over left lobe. Secretion collected on massage contained numerous pus cells. The patient was treated over a period of six weeks, rendered prostate free of pus, albumin being absent since the fourth week. A year later the patient received insurance for which he applied.

Case 2. A merchant, age 44, married, complained of iritis of six weeks' duration. His tonsils had been removed four weeks previously. X-ray examination of the teeth was negative. There was no history of urinary infection. Urinalysis was negative, other than a very occasional pus cell. The prostate was not enlarged, but there was a definite nodule in the left lobe. Massage expressed a yellowish secretion, which was loaded with pus. Iritis began to improve at once upon treatment and subsided entirely after the fourth week, but ten weeks' treatment was required to free the gland of pus.

#### ALUMNI CLINIC WEEK

The physicians of the southeast are cordially invited to attend the alumni clinics to be conducted at Grady Hospital beginning on the morning of June 5 and continuing through Friday, the 8th.

Two hours each morning will be devoted to operative clinics and the remainder of the day to lectures by the Emory faculty.

Friday night will be the annual meeting of the Alumni Association and banquet at the Biltmore Hotel.

All physicians are requested to register and get their badge on arrival. The registration desk will be at the Butler Street entrance of Colored Grady. There will be no charge whatever. All physicians, whether Emory Alumni or not are welcome. Saturday, June 8, is Alumni Day on the campus.

## URINARY TRACT INFECTIONS\*

MONTAGUE L. BOYD, M.D.

Atlanta

Head Department Urology

Emory University School of Medicine

It is no longer excusable, in the majority of instances, for a physician to overlook urinary tract infections, or to treat them with the so-called urinary tract antiseptics *without seeking to discover their cause, extent, and significance.*

During this past summer I made several talks upon urinary tract infections emphasizing this fact. In September I summarized the points which I brought out in my talks in an article which was published in *American Medicine* (Sept., 1933), and I am now taking the liberty of presenting that material here hoping that you may help me by your criticisms and suggestions.

The points which I wish to discuss are the following:

1. Examination of urine to determine the presence or absence of infection.
  - (a) Collection of the urine.
  - (b) Examining the urine.
2. The causes of urinary tract infection.
  - (a) Single and multiple causes.
  - (b) Toxic injury. (c) Obstruction.
  - (d) Trauma.
3. The bacteria of urinary tract infections.
4. Treatment.

#### 1. *The Collection and Examination of the Urine.*

A proper examination of the urine to determine the presence or absence of infection is so simple that almost any physician can obtain the facilities and time to perform it when necessary. And the necessity exists often when the urine appears clear microscopically; for in the diagnosis and treatment of urinary tract infections the occurrence of even a few bacteria in the urine may be of great importance.

The specimen of urine must be so fresh that there exists no possibility of bacteria

\*Read before the semi-annual meeting of the Georgia Urological Association, Savannah, October 26, 1933.

having grown in the urine, and it must be obtained in such a manner that it will not contain pus, and bacteria which come from inflammations in and about the male urethra, from the vulva and vagina, or from beneath a long prepuce. In little boys, who have a short foreskin, a specimen may be voided in one glass, but in little girls it is best to thoroughly clean the vulva and then have the specimen voided in two parts and examine the second part. In unmarried women a voided specimen is at times adequate, but not unless the vulva is thoroughly cleaned and the specimen voided in two parts when; the condition of the vulva and vagina are not known, copious vaginal irrigations should be employed before the urine is voided into two separate vessels. As a rule urine should be obtained from women by catheterization. In larger boys and the adult male the urine should always be voided into two or three glasses and always enough urine passed in the first glass to insure that the second glass is free from products of inflammation and infection from the urethra. There remains only one other manner in which pus from the urethra can cause confusion and that is in active posterior urethritis, whether acute or chronic, in men when the inflammatory products overflow the posterior urethra and enter the bladder, the internal sphincter offering less resistance than the external sphincter.

Making an examination of a stained smear of the urinary sediment is the one practical method of telling immediately whether bacteria are present even if in only small numbers. It also discloses whether the bacteria which are present are cocci or bacilli. Loeffler's methylene blue is a satisfactory stain for use in this work because it is stable and stains the smear intensely and rapidly, showing bacilli and cocci clearly, and making it possible to distinguish between epithelial cells and pus cells. Epithelial cells in the urine may be mistaken for pus when the examination is made by allowing the sediment to settle to the bottom of the glass and then examining it without either staining or adding acetic acid. The mistake is more readily made when most of the epithelium happens to come from the kidney. And such a mistake can

very well result in grave injury to a patient, as I have seen happen, but fortunately that is the exception and not the rule.

## 2. *The Cause of Urinary Tract Infections.*

Infections of the urinary tract do not occur without the existence of some congenital or acquired abnormality in the urinary tract. This has been demonstrated experimentally by the injection of bacteria into the normal tract without the development of infections, and also, by investigations which have shown that bacteria are frequently passed into the blood and thence into the urine as the result of disturbances of the gastro-intestinal and respiratory tracts without infections developing in the urinary tract. In recent years an increasing number of studies have shown that bacteria get into the blood stream in even the milder bodily disturbances such as constipation, diarrhea, dysentery, colds, pharyngitis, bronchitis, appendicitis, and more often, of course, in the more serious infections. Bacteria, then, frequently pass from the blood stream through the kidneys to the urinary tract without infections developing in the urinary tract if a normal condition of the tract exists. This is not peculiar to the urinary tract but is applicable to most of the other parts of the body; for example, pathogenic bacteria are constantly present in the mouth, pharynx, nose, and intestinal tract without infections developing until the surrounding tissues suffer some kind of injury or change.

The injuries which the urinary tract usually sustains preceding or accompanying the development of infections may be grouped as follows: 1. Those due to poisons which come to the urinary tract through the blood and produce injury to the kidneys and to the mucosa of the tract. These poisons almost always come from infections elsewhere in the body; for example, from tonsillitis, appendicitis, and colitis. 2. Those due to a continuous or intermittent obstruction to the normal flow of urine through the urinary passages; for example, ureteral strictures, prostatic enlargement, and urethral strictures or obstructions. 3. Trauma; the most common example being that produced by stone, but also seen following urinary tract opera-



tions, instrumentation, and traumatic injuries from external violence.

### *Single and Multiple Causes*

Although it is customary to list the causes separately we must appreciate the fact that the more important urinary tract infections are, as a usual thing, produced and continued by more than one cause. For the most part the urinary tract infections having only a single cause for their existence are the milder and less important infections; a good example of the ones resulting from toxins alone being the urinary tract infections seen at times in typhoid fever which disappear spontaneously when the typhoid fever disappears.

Some one cause for the urinary tract changes might be so severe or so long continued that the urinary tract infection would continue after the cause was relieved, but this is not usually the case. Take, for example, one of my patients who had a severe chronic, at times acute, cystitis, which persisted for about nine months, but cleared up within a week or ten days after the removal of a chronically inflamed appendix, and has not recurred during the following two years.

Another illustration of a single cause (urinary obstruction) is the disappearance of a long standing cystitis when the obstruction to urination, caused by enlargement of the prostate, is removed; this in my cases is not at all unusual. Knowing the changes which occur in the bladder with *prolonged* obstruction at the neck of the bladder one would believe that an infection, once established, would continue indefinitely. Because, as the result of the obstruction, the bladder muscles first hypertrophy, and then later on the hypertrophied muscle tissue is replaced in varying degrees by fibrous tissue. When infection occurs in these cases, the fibrous tissue changes are often severe so that evidence of inflammation may sometimes, at suprapubic cystotomy, be seen outside the bladder. And yet it happens that in many of these cases the bladder infection disappears in a reasonable time after the obstruction to urination is removed.

Trauma caused by stone, when it is unaccompanied by any of the other causes for infection except the presence of bacteria in

the urinary tract, may not produce an infection, or if an infection develops it may disappear. But if a toxic injury also exists, or an obstruction to the urinary flow, infection is most apt to occur and is then more or less incurable until the causes for the continuation are removed.

When an infection of the urinary tract takes place it can frequently be kept up by some cause which in itself was insufficient to bring about the development of the infection. One encounters many illustrations of this, among the commonest being the continuation of a bladder infection after prostatectomy by a large size urethral stricture, by a congenital narrowing of the meatus, a chronic infection of an antrum, a chronic colitis, or a chronic cholecystitis. Disregard of this fact has resulted in a misunderstanding of the important part which many mild appearing sources of toxins, and many of the less evident causes of urinary obstruction, play in the continuation of urinary tract infections. More extended searches should be made for obscure causes for the continuation of infection, and the urologist should not be satisfied to permit his post-prostatectomy cases to continue with bladder infections indefinitely without making efforts to discover whether or not there is a relievable cause present.

### *Toxic Injuries*

The injuries to the urinary tract produced by toxins, which are carried to it through the blood may be of more than one character, the most important being injuries of the mucosa—because the mucosa is the most common seat of urinary tract infections, the only other seat of infection being the kidney substance.

Because the infection begins within the urinary tract rather than in the wall of the pelvis, of the ureter, or of the bladder, it is natural perhaps to think that the damage to the mucosa is the result of the toxins being passed through the kidney into the urine, and the injury then produced by the contact which the urine makes with the mucosa. While this is so in certain instances, and may as far as I know be so in the majority of cases, it remains evident that all of the

tissues of the urinary tract must suffer the same injuries as those experienced by the rest of the body, and the damage of tissues other than of the mucosa may really be extensive enough to permit infection to occur readily in them if, as in the urinary passages, the bacteria came in contact with them outside the blood stream, and were delayed in their passage as they are in the kidney pelvis and bladder. So, no doubt, there frequently is damage to the mucosa both by toxins in the urine and those in the blood.

A delay to the direct passage of the bacteria through the urinary tract occurs in the kidney pelvis and in the bladder, and this delay is often accentuated by fever and sweating which causes the urine to become concentrated; and by an impairment of the expulsive action of the urinary organs by an action of the toxins on the musculature of the ureters and bladder.

There seems to be no selective action on the urinary tract of any certain bacteria, or of their toxins. We do not have enough evidence to prove this, but we know which bacteria are most commonly found in the urinary tract. And we know which of the extra-urinary tract infections are more commonly found preceding and accompanying urinary tract infections—tonsillitis, appendicitis, colitis, sinusitis, antrum infections, bronchitis, pulmonary and other extra-urinary tract tuberculous infections, diverticulitis, cholecystitis, mastoiditis, and various infections with streptococci.

Evidence of the changes, which take place as the result of toxins or toxemias, can at times be seen in the urine along with symptoms of irritations, such as increased frequency of urination and burning on urination, without an actual infection appearing in the urinary tract. I have had among my patients two instances of this which are so outstanding that they are worth calling to your attention; both in young men, both with blood and epithelium and some polymorphonuclears in the urine, and an actual incontinence of urine caused by the severe urinary tract irritation. Both had small acute tonsillar abscesses which ruptured while the throat was

being examined, and immediately afterwards the symptoms began to rapidly subside and disappeared without treatment of the bladder irritation. In other cases of this kind the disturbance which often brings the patient to a physician is an increased frequency of urination with, usually, a burning on urination. The symptoms may be mild or severe, and examination of the urine shows the products of irritation without infection and the whole thing clears up as soon as the source of the toxins is removed.

### *Obstruction*

Obstruction caused by acquired urethral and ureteral strictures, prostatic hypertrophy, and stone in the kidney, ureter, and bladder are easily recognized and understood. Those due to congenital abnormalities of the bladder and urethra are not usually so well understood; the most common illustration is the congenital stricture of the urethral meatus in the male. Congenital and acquired stricture of the urethral meatus in the female seems to have been generally disregarded in spite of the fact that their existence is so readily demonstrated. Evidently a small meatus in the male can produce trouble, but a congenital or acquired meatal narrowing of the same size in the female has attracted little or no attention even when symptoms and evidences of bladder disturbance and infection existed which would not be relieved by the ordinary measures.

Congenital narrowing of the meatus has often proven to be one of the essential factors in the production of cystitis and pyelitis in little children, and not infrequently in young women. On many occasions meotomy has relieved urinary tract infections which had resisted "treatments" for years.

Fibrosis occurring in the tissues about the urethral meatus in the female is a very common occurrence, so that, acquired narrowing of the urethral meatus in women, especially those who have borne children, is also very common. Not infrequently, the meatus is congenitally small, but not sufficiently so to be of significance until the narrowing is accentuated by the fibrosis which so often oc-



curs about the meatus when there is a perineal relaxation, a perineal tear, or a prolapse of the urethra and bladder. The fibrosis in the congested and irritated tissues which occurs as a result of these conditions is of course accentuated by an irritating vaginal discharge; while in some cases the discharge is sufficient in itself to cause these fibrotic changes which so successfully narrow the urethral opening.

With the chronic congestion of the female genital organs which comes with and from the above causes, there frequently occurs a congestion of the urethral mucosa, which may result in a *prolapse of the mucosa* into and through the meatus which can, when pronounced, produce a sufficient obstruction to cause and continue infections.

Still further *prolapse of the female urethra* is a very fertile source of obstruction to the outflow of urine. First, because it rarely exists for a long time without producing fibrotic changes about the meatus and next, because the congestion accompanying the prolapse frequently produces a protrusion of the urethral mucosa at the meatus, and lastly, because the only part of the urethra which is fixed in these cases is the meatus, so that, when the patient strains to void, the bladder (of which there is nearly always a prolapse also) and urethra tend to swing out of the vagina, and the stream of urine must be forced upwards along the compressed and bent urethra.

Among other causes of urinary obstruction are: Carcinoma of the prostate causing a narrowing of the membranous urethra, or causing a fixation and obstruction at the bladder neck by the carcinoma of the prostate extending into and about the orifice; carcinoma of the bladder causing obstruction at the vesical orifice, but more frequently causing obstruction of the ureter by involvement of the ureteral meatus, or by extension into the bladder wall (or beyond it) about the ureter; urethral valves of congenital origin; fibrosis of the neck of the bladder and congenital bars; hypertrophy of the verumontanum or of the trigon of the bladder; cysts of the prostatic

urethra; congenital abnormalities in the shape and position of the kidneys; aberrant renal arteries obstructing the ureter; tumors of the ureters and kidney pelves; tumors of the uterus; pelvic inflammatory disease.

The obstruction may not be great enough by itself to bring about an infection even when bacteria are present in abundance, but it may be great enough to assist in the production of the infection when other urinary tract injuries occur, and once established it may not be possible to rid the tract of the infection without removing the obstruction even though the other cause (or causes) of injury has disappeared. For example, one of my prostatectomy cases continued for almost a year to have a bladder infection and an annoying frequency of urination, and he was unrelieved in spite of many kinds of treatments until an infected antrum, which though badly infected gave no local symptoms, was discovered and drained, when he immediately recovered.

### *Trauma*

Except that caused by stone and operative procedures which leave unclosed wounds in the urinary tract, trauma is not frequent as an etiological factor in the production of infection, except the acute pyelonephritis brought on by urethral instrumentation which is frequent enough for most of us to have had some experience with it. The recognition of the possible seriousness of the infection has in the past been delayed by the employment of the term "urethral chill" to designate the condition. The term should be completely discarded.

Indirect injuries to the kidney or bladder of course do not always result in urinary tract infections even when at times the injury is extensive, as in rupture of the kidney.

### *The Bacteria of Urinary Tract Infections*

The most common organisms found in the urinary tract infections are those belonging to the colon bacillus group since the most common causes of bacteria appearing in the blood stream are disturbances of the gastro-intestinal tract. But bacilli are often passed into the blood stream and to the urinary tract from gastro-intestinal tract disturb-

ances which are not severe enough to produce a toxemia which will injure the urinary tract sufficiently to permit the bacteria thus passed into the urine to develop into an infection there. At times, however, this does happen, as in severe appendicitis, severe colitis, cholecystitis, and diverticulitis. On the other hand, the gastro-intestinal disturbances, which so frequently accompany active infections elsewhere in the body, are often of sufficient extent or severity to permit the passage of bacteria from the intestines to the urinary tract so that the urinary tract infection is then the result of bacteria furnished by the intestinal tract and of an injury of the urinary tract caused by the toxins of the infection. Mixed infections of bacilli and cocci are not at all uncommon and are of course to be expected for a coccus, as well as the toxins, may come from the infection while the bacilli come from the disturbance of the gastro-intestinal tract caused also by the infection. The colon bacillus is naturally therefore the organism most commonly found in the infections of the urinary tract which are caused by urinary obstruction, since the gastro-intestinal tract is the source from which bacteria most frequently come to the urinary tract.

The infections of the body due to the cocci are often severe enough to produce sufficient toxic changes in the urinary tract as well as to supply the infecting bacteria. We see examples of this in infections of the skin, in streptococcic infections almost anywhere, in tonsillitis, mastoiditis, and cholecystitis.

It has been suggested that certain bacteria have a predilection for producing infection in the urinary tract when they gain access to the blood stream. We do not, however, have sufficient proof of this as yet.

The difference between the lesions produced in the urinary tract by various kinds of organisms are on the whole not of great enough importance to warrant our going into the subject here, except to point out that there is a difference between the acute lesions produced in the kidneys by the bacteria coming to them through the blood stream—the bacilli tend to pass through the kidneys and the infection develops in the pelvis and calyces, while the cocci grow in the substance of

the kidneys. Also, it is worth noting that the cocci are the bacteria which are said to be the most frequently associated with the beginning of stone formation in the urinary tract.

In my experience, chronic infections of the urinary tract with streptococci are comparatively rare. When streptococci are found they are usually present with other bacteria, and unless the infection grows steadily worse, they disappear before the others. Staphylococcus infections are apt to be more resistant to treatment than those caused by bacilli, especially when the infection is located in the kidney, but I am not satisfied that such is actually the case if and when the coccus infection is limited to the mucous membrane of the tract as it usually is with bacillary infections; the accessory causes which exist with staphylococcus infections are perhaps more difficult to eradicate than those which exist with bacillary infections, and on that account they are harder to cure. In my own experience I have been able to show in several cases an association of staphylococcus pyelitis with gallbladder infections, and I am of the opinion that there is a connection, though not a fixed one, between these diseases.

On the whole then we might say that the importance of knowing whether the urinary tract infection was caused by a bacillus or a coccus is principally because of the difference in prognosis between acute infections of the kidney with one or the other of these organisms, because a search for stone in the urinary tract should be more vigorously pushed when cocci are found in the urine, and because a suggestion as to the source of the bacteria might be obtained.

### *Treatment*

It is evident from the above that the way to cure urinary tract infection is by relieving the cause of the infection. Until this can be done the ill effects of the infection should be controlled as much as possible; and in most instances that is best done by employing some of the drugs which are most suited to prevent the growth of bacteria in the urine, namely, the "urinary antiseptics."

According to a report by Dr. Edwin Davis,



at the 1932 meeting of the Urological Section of the A. M. A., there are two drugs which are fairly effective in controlling the growth of bacteria in the urine "in vitro." Not only is there a great difference between the results obtained in experimental work such as was done by Davis and that obtained in the urinary tract of patients, but there is quite a difference in the effect of the antiseptics upon bacterial growth in the urine when there is a marked inflammation present in the urinary tract and when there is only a mild one or none at all. Possibly much of the antiseptic passed into the urine is rendered inactive by being taken up by the inflammatory products which appear when the infection and inflammation are severe. However, clinical experience with the two drugs which were found by Davis to be more or less effective in preventing the growth of bacteria in the urine confirms his findings and I am prepared to recommend their use—Methenamine for urine which is acid and acriflavine for urine which is alkaline. Both drugs may be given at the same time.

It is easy to be misled into believing that a urinary tract infection has disappeared as the result of the administration of some drug or because of the employment of some method of treatment when in reality the cause for the seeming cure is the disappearance of the causes for the occurrence of the infection. In such instances the infection disappears by itself, as we see for example in the bladder infections which occur in more or less normal bladders when catheterization is necessary for retention of urine after operations; also in the transient bladder infections which occur during typhoid fever; and in the transient infections which at times occur in acute attacks of tonsillitis, diverticulitis, and appendicitis. In other instances part of the causes for the appearance of the bladder infection may disappear, and those which remain and cause a continuation of the infection are so slight that the infection soon disappears after the administration of a urinary antiseptic.

While urinary antiseptics are *urgently indicated* in the treatment of urinary tract infections it must be remembered that the beneficial results, obtained by urinary antiseptics alone *in some cases*, do not warrant the in-

discriminate treatment of patients by urinary antiseptics *alone*. *In every case perhaps of urinary tract infection, urinary tract antiseptics should be employed but the cause for the appearance of the infection must be discovered if possible, and if possible removed.* In post-operative urinary retention the cause for the infection is usually removed when the patient begins voiding freely again and catheterization is stopped; in acute tonsillitis the cause is often relieved when the acute inflammation in the tonsils subsides, but should there be a chronic infection remaining in the tonsils, its treatment should certainly be recommended at least to prevent possible reinfection of the urinary tract.

Where obstruction is part of the cause of an acute or chronic urinary tract infection, whether it be in the kidney or in the bladder, drainage by catheter is at times indicated as a temporary measure to assist in the preparation of the patient for the more radical measures which must be employed for the cure of the obstruction. A commonly seen illustration of this is the preparation of patients for prostatectomy by catheterization; another one is acute pyelitis of pregnancy where there is a ureteral stricture or a ureteral stone or some other ureteral obstruction, and there are a good many others which could be mentioned if space was available.

As I have pointed out above, a urinary tract infection may be continued by a degree of obstruction to urinary flow, which ordinarily is not sufficient in itself to produce changes extensive enough to cause an infection. But once the infection is established these milder degrees of obstruction must often be relieved before the infection can be cured. Illustrations of this are seen in congenital or acquired obstructions at the urethral meatus, urethral strictures of larger size in the male, and in prostatic bars and fibrosis of the vesical neck causing only a moderate slowing up in the size and force of the urinary stream.

Where traumatic injuries to the urinary tract occur and infection supervenes, unusual drainage—drainage even beyond that demanded for infection without traumatic tissue injury is indicated in many instances, for example, in transurethral operations about

the neck of the bladder, and traumatic rupture of the kidneys.

### *Summary*

Overlooking urinary tract infections is no longer excusable. Nor is a doctor justified in treating urinary tract infections by merely prescribing a "urinary antiseptic." The cause of the infection should in every case be discovered, and, where possible, removed. To treat a patient for "pus in the urine" is an exhibition of either carelessness or ignorance which must be avoided.

We can list under four headings the causes of urinary tract infections. These are presented and discussed. Although many causes of urinary tract infections are recognized and properly treated there are other rather common ones which are overlooked or not treated. Some of the latter are discussed.

There does not seem to be a general recognition of the fact that urinary tract infections, which are of serious character, usually have several etiological factors, or that, once an infection is begun, it may be continued by conditions which may very well be insufficient to cause an infection. Also, that urinary tract infections may be continued by more than one factor—no one being alone able to cause or continue the infection.

Treatment consists of the employment of the general measures by which all infections are combated, by giving urinary antiseptics and by discovering and removing the causes of urinary tract infections, recognizing that what appears to be only slight extra-urinary tract infections, or only slight urinary obstructions may be of real importance in continuing an infection.

Methenamine and acriflavine seem experimentally and chemically to have some value in treating urinary tract infections. Most of the other so-called urinary antiseptics are of doubtful value.

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The Chicago Medical Society at a recent meeting passed resolutions opposing the exploitation of drugs, remedies, etc., over the radio. Its members believe that concerted action of the state societies through the American Medical Association should be able to modify or entirely eliminate much of the misleading information now being broadcast. It is suggested that similar action be taken by other state associations.

## NEPHROPTOSIS\*

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Nephroptosis is the term applied to kidneys more than normally movable. It has long been known that the kidney occasionally becomes very movable. Cases were recorded by Francois Pedemontanus in 1581, and by Riolan in 1682. The first clinical studies of movable kidney were made by Rayer.

The position of the average normal kidney extends from the lower border of the eleventh dorsal to the upper border of the third lumbar vertebra. The kidneys are lower in the erect than in the dorsal posture. In two-thirds of all cases the right kidney is lower than the left. Immediately surrounding the kidney is the perirenal fat, or, as it is frequently called, the "fatty capsule." Its function seems to be to afford a cushioning to prevent jarring. The amount of perirenal fat varies greatly in the adult, but is rarely entirely absent; even in very thin people it is frequently abundant.

The average mobility of the kidneys in respiration is somewhat greater in women than in men and varies from about 2 to 5 cm. One of the earliest suggestions as to the cause of abnormal mobility of the kidney was an abnormal length of the renal vessels, the shortness of the renal artery on the left side being given as an explanation of the relative infrequency of abnormal mobility in that kidney. The average length of the right renal artery is 7 cm; of the left 5 cm. A relaxed abdominal wall is considered effective in bringing about abnormal movability of the kidney.

Movable kidney in most cases is acquired, although Becher and Lennhoff contended that people with long narrow chests and lumbar regions have movable kidneys, and those with short broad trunks, as a rule, have them well-fixed. The causes of abnormal mobility, therefore, may be classed as follows: (1) peculiar body form; (2) pregnancy and childbirth; (3) rapid absorption of perirenal fat; (4) tumors and stones of the kidney; (5)

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trauma; (6) menstruation; (7) congenital predisposition; (8) dragging of the cecum.

Usually the inflammatory processes which occur around kidneys with stones and tumors quickly anchor them. Hydronephrosis which occurs with movable kidney should be considered secondary rather than primary. The majority of movable kidneys do not develop hydronephrosis.

The violent expulsive efforts of labor may dislocate the kidney, and the distention of the abdominal walls during pregnancy may result in a relaxation afterward lowering the intra-abdominal pressure, thus favoring the development of movable kidney. Some cases develop symptoms immediately after labor and others may develop symptoms months later.

The rapid disappearance of the fatty capsule surrounding the kidney may cause movable kidney, although it is not unusual to find a well-fixed kidney with little or no fatty capsule.

Accidents such as falls, blows, and the like; excessive straining (as sometimes occurs in cases of marked constipation), and straining due to heavy lifting; the often repeated excessive contraction of the diaphragm which occurs in chronic pulmonary conditions, causing repeated coughing; and the continuous jolting of various exercises such as horseback-riding, may all be the cause of movable kidney.

The increased weight of the kidney as a result of the congestion at the menstrual period may develop abnormal mobility. Many patients give histories of attacks of pain at this period alone.

In some instances, when the cecum is drawn down, the attachments between the colon and the right kidney are sufficient to cause a pulling down of that kidney.

Movable kidney is more frequently seen in women than in men, and makes its appearance most commonly in the middle period of life.

About one out of every ten cases of movable kidney displays symptoms. As this paper only deals with that class which does have symptoms, the following ones are listed, which may be slight or pronounced; local pain in the loin, gastric disturbances, nervous-

ness, urinary disturbances, gallbladder symptoms, and symptoms of unusual character such as edema of the leg, vomiting of blood, severe headaches and neuralgia.

The different groups of symptoms and their intensity vary with the individual. A patient may have one symptom or all of them may be present, but by tactful inquiry, the physician will discover in almost every case some local symptoms associated with the kidney itself.

The kidney may be movable to the third degree with little or no disturbances, while frequently one only slightly movable will present most severe symptoms. As an example, gastric symptoms are due to the pulling on the duodenum by the ptosed kidney.

Pain with movable kidney may be dull but almost continuous, and it may come in the form of attacks. Forceful injection of the pelvis of the kidney with fluid, through the catheterized ureter, will reproduce the pain suffered. The upright posture and exercise greatly aggravate the dragging pain of a movable kidney and many patients complain of inability to lie on the side opposite to that of the movable kidney. Patients, who have attacks of pain, frequently become violently nauseated, have vomiting and often fever. Frequently the patient may pass a large quantity of urine subsequent to a severe attack.

The urinary examination in the case of movable kidney should be most careful. The finding of blood and pus in the urine is not to be associated with movable kidney. Only in acute attacks of Dietl's crises are found occasionally albumin, casts and a few red blood cells in the urine.

With the advent of the cystoscope and the modern x-ray equipment, the diagnosis of movable kidney is relatively simple. By the use of the cystoscope, catheters are introduced into each ureter, specimens are collected for culture and then the x-ray pictures are made. I make it a rule to have a picture made with the patient in the dorsal position before injecting the opaque solution; another, after injecting the opaque solution until the pelvis is filled and then withdrawing the catheters to a point just above the orifice and gradually injecting as the catheters are withdrawn. The table is then raised to the semi-erect position,

and after the patient has taken several deep breaths, a third picture is made, which will show how far the kidney has moved from the normal position and will also demonstrate kinks or strictures of the ureter. In recent years, the intravenous method of pyelography has come into existence and time has proven that it is a good adjunct to the urologist, but that it cannot replace our method of retrograde pyelogram.

In the treating of cases of movable kidney, it is well that every effort be made to clear the kidneys of any infection that exists, as evidenced by cultures being made from catheterized ureteral specimens of urine. Infection, we know, will ultimately destroy a movable kidney if allowed to continue. In my personal experience, all cases of movable kidney have proven to be infected. The common causes of kidney infection are colon bacilli, streptococci and staphylococci, the cocci group composing about 50 per cent of the infections. In the treatment of the cocci group, we find that it is necessary to alkalize, and that good results are obtained by the intravenous administration of neo-arsphenamine. For the colon bacilli, it is essential that the urine be acid and I am obtaining very satisfactory results with the intravenous use of uritone, alternated with metaphen. Some cases of movable kidney can be relieved by putting the patient to bed, the foot of which is elevated, and forced feeding, endeavoring to have the patient increase in weight so that nature will deposit fat in the loose tissues of the fatty capsule surrounding the kidney; and since the foot of the bed is elevated, the loosest tissues are found below the lower pole, as gravity will return the kidney to its normal position and hold, allowing nature to make an effort to naturally fix the kidney in its normal position. For those patients that are unable to go to bed a temporary relief may be offered, in most cases, by applying a well-fitted corset with kidney pads so inserted as to hold the kidney up nearly to its normal position. The last, and most satisfactory treatment, is to do a nephropexy and anchor the kidney in such a position that the ureter can drain without any interference, and at the same time it is advisable to free the ureter from any ad-

hesions from the pelvis downward as far as the ureter can be reached. In those cases showing a clubbing of the calyces, resulting from the destruction of the kidney tissues by infection and faulty drainage, my advice is not to temporize but to do a nephrostomy and nephropexy at the same operation, thereby anchoring your kidney for best drainage through the ureter; also having your tube through the cortex of the kidney into the pelvis for irrigation as well as drainage, in order that further kidney damage will be prevented.

#### Case Reports

*Case 1.* Mrs. J., aged 37, two children, the youngest 12 years old, complained of pain in the back, both sides, frequent urination, nocturia, pain and burning. She had had periodic attacks of the above symptoms since before her last child was born. These symptoms were gradually getting worse. On taking the history, it was learned that she suffered during these attacks with nausea and vomiting, extreme nervousness, and marked urinary disturbance, though she has never seen any blood in the urine or afterwards. On bimanual examination, the right kidney was palpable below the crest of the ilium and the left kidney was palpable, its excursion being nearly to the crest of the ilium. The patient was cystoscoped, specimen catheterized from the right kidney showed numerous pus cells, red blood cells, and the cultures were positive for colon bacilli. X-ray shows left kidney in normal position, the right low in the dorsal position. With the patient in the erect position, the left is shown down and the right rotated on its axis and goes below the crest of the ilium. She was advised to have a right nephrostomy with anchorage of the right kidney at the same time, and later to have an anchorage of the left kidney.

*Case 2.* Mrs. E., aged 45, had no symptoms suggestive of urinary disturbance, though she had had periodic attacks of frequency in the past due to a pyelitis. At a recent examination she had been found to have an elevated blood pressure, and in an attempt to find the cause of this rise in blood pressure, a urologic study was made, and culture from the right kidney was positive for streptococci and colon bacilli. The x-ray revealed a marked ptosis of the right kidney with slight destruction of the kidney tissues around the calyces. Owing to the destruction that existed, an immediate nephropexy was advised and appropriate treatment for her kidney infection instituted and since that time, her blood pressure has shown a gradual continuous decline until it has nearly reached its normal level.

*Case 3.* Mrs. B., aged 26, no children, complained of periodic attacks of frequency and painful urination, accompanied by mild gastric upset. These attacks were becoming more frequent and the symptoms more aggravated. Voided specimen of urine showed much pus. Bimanual examination revealed the right kidney freely



movable with the lower pole coming to a point about level with the crest of the ilium. Skiodan was given intravenously and with the patient in the erect position, a picture was made in 10 minutes after administration and this showed the left kidney normal in position, draining well, with the right kidney low in the right flank and rotating on its axis with very poor drainage. Following this examination, the patient was fitted with corset with kidney pad and allowed to continue her duties as school teacher until the end of school, at which time she was put to bed and given a high fat diet and in the course of six weeks, she had gained 16 pounds. After this time she was allowed up for short periods which were gradually increased in length until before school opened in the fall, she was allowed to be up for the entire day. She returned to school and in only a short time had a recurrence of her symptoms. She was again fitted with a corset that she wore until plans could be made for her to enter the hospital and have a nephropexy done. Four months now have elapsed since her operation and she has had no symptoms to return in that time.

Case 4. Dr. A., aged 39, had had a little nagging pain in the right flank with one attack of what he thought was acute indigestion. At that time he was examined by a competent surgeon for the possibility of an acute attack of appendicitis, which was ruled out. This nagging pain has continued with a slight increased tenderness over McBurney's point, which caused the patient much worry. Bimanual examination revealed a freely movable right kidney. Skiodan given intravenously with x-ray made in 12 minutes after administration, the patient being in the upright position, shows a marked ptosis with stasis of the dye in the pelvis. There is some evidence of tissue destruction around the calyces. In spite of these findings, I advised his surgeon that it would probably be best to remove the appendix and remove that possible focus of infection; following which we would keep the patient in bed for a period of 30 days under forced feeding in an attempt to rebuild the fat pad around the kidney sufficient to hold the kidney in place. This was done and when the patient was up again, very quickly the kidney was found to be down in the old position. Following this a well fitted corset applied and patient continued to work. At last he decided to accept our advice and had his kidney anchored, as he continued to have his little nagging pain in the right flank and testicle, and the corset did not satisfactorily hold the kidney in a position that would allow free drainage.

Case 5. Mrs. K. This last case is reported for two reasons, one is, that the kidney is movable, also that it is fused or horseshoe kidney. The patient developed an acute cystitis following a furunculosis, having frequency, urgency, pain, burning and terminal hematuria. Medical treatment was given until the acute symptoms of cystitis subsided, at which time the cystoscopic examination was made, finding numerous small ulcers in the bladder, and a marked inflammation throughout. Catheters were passed into each orifice for a distance of about 16 cm. Cultures from each kidney were negative.

Bladder culture showed staphylococci. A pyelogram was made in the dorsal position, shows the calyces and pelvis distorted, and in an abnormal position; showing also that the kidneys are fused at their lower poles; another picture made in the upright position shows that the right kidney swings downward and pulls across toward the midline. There is some downward motion of the left. Culture from one of the furuncles shows staphylococcus. Under appropriate treatment all symptoms have subsided and there being no infection in the kidneys, nor any reason to offer surgical interference, patient was advised to do nothing regarding the fused condition of the kidneys, except let them alone and remain under observation, so that if it should be necessary, the proper treatment could be given.

### *Summary*

My conclusions are that if proper care is exerted, that all cases of movable kidney will show some type of infection, which must be cleared, and that all these cases may be given temporary relief with temporizing methods, but to give permanent relief must have appropriate anchorage to establish drainage in order to preserve the kidney. Some of these cases may be so far damaged from infection, that it is necessary to do a nephrostomy for drainage and for the purpose of irrigation to help clear the existing infection.

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### EXTENSION COURSES

The extension courses for the physicians of our state will be continued this year as in the past through the kindness of the medical departments of the University of Georgia and Emory University, the State Department of Public Health cooperating. A preliminary meeting has been held and the places for the courses, as well as the time, will be announced in the next issue of Georgia's Health. The intention, at present, is to hold twelve schools in twelve sections of the state. The lectures will be given in the afternoons of the five days as usual.

It will be recalled that these are put on for our physicians without charge. The opportunity offered should be taken by every one who can possibly go. A full program will be mailed to every physician in the state in ample time. The first lectures will begin July 2nd.

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The National Society for the Prevention of Blindness, 50 West 50th Street, New York City, announces that the Leslie Dana Gold Medal, awarded annually for outstanding achievements in the prevention of blindness and the conservation of vision, was presented to Dr. F. de Lapersonne, French Ophthalmologist and President of the International Association for the prevention of blindness, at the annual meeting of the Association held at Paris, May 14th. Dr. de Lapersonne is the second European to be awarded this prize. The late Dr. Ernst Fuchs of Vienna received the award in 1929.

## HEMI-NEPHRECTOMY FOR PYO-NEPHROSIS INVOLVING THE LEFT HALF OF A HORSESHOE KIDNEY\*†

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As several interesting articles concerning horseshoe kidney have recently appeared in medical literature, no attempt will be made to enter into a discussion concerning its anatomy, embryology, etc. Anomalous kidneys, regardless of their type, are all subject to pathological conditions and are especially predisposed to renal calculi, hydronephrosis, pyonephrosis, tuberculosis, tumor, etc. In horseshoe kidneys, one may encounter pathologic lesions which are not easily recognized. Interference with drainage, due to the presence of aberrant vessels, pressure exerted by the isthmus upon the pelvis, abnormal insertion of the ureter, is the underlying etiological factor. The renal pelvis and the vessels as a rule lie anteriorly and the ureter instead of draining the pelvis from its dependent portion, may lead off from a lateral position. In addition, the ureter may be compressed by extending downward in front of the isthmus.

From 1909 to 1931, at the Mayo Clinic, 68 cases of horseshoe kidney were verified at operation. In 29 there were calculi, hydronephrosis in 17, and pyonephrosis in 7.

The correct pre-operative diagnosis is at times rather difficult in spite of the several aids at our disposal. Loffler in a report of 108 operations upon horseshoe kidneys, states that a correct diagnosis was made only in 12. Rathbun reported a series of 3 cases, in which the correct diagnosis was made pre-operatively in one. Judd, Brasch and Scholl, in a series of 17 cases, made a correct pre-operative diagnosis in eight. Eisendrath in 1925 reported 3 cases diagnosed before operation and since then has added others. One of us (S. J. S.) recently reported a case of pyelitis involving the left half of a horseshoe kidney in a girl 12 years of age. The diagnosis was



Fig. 1. Retrograde pyelogram showing pyo-nephrosis involving the left half of a horseshoe kidney.

based chiefly on the typical pyelogram, palpable tumor, and evidence of infection in the left kidney.

The horseshoe kidney per se, does not give rise to any characteristic symptoms. Pathological lesions affecting this type of anomalous kidney will give rise to symptoms depending upon the pathology present. Our chief means of diagnosis is the pyelogram. The renal mass lies close to the median line, the calyces pointing in a downward direction, or toward the vertebral column. The ureters are shortened.

Treatment is directed toward the pathological lesion found. In cases, however, where a hemi-nephrectomy is to be performed, the surgical technique differs somewhat. The usual extra-peritoneal approach is preferred. The upper pole is freed and the operator works slowly from above, downward. The vessels are ligated and cut as soon as they are encountered, as their anatomical arrangement is altered. The ureter is divided in the usual manner. The isthmus is divided between two crushing clamps or chromic ligatures. If the pedicle is broad, mattress sutures are used.

\*Read before the semi-annual meeting of the Georgia Urological Association, Savannah, October 26, 1933.

†From the urological service of Dr. Stephen Brown, Grady Memorial Hospital, Atlanta, Georgia.





Fig. 2. Showing congenital anomaly of right kidney following intravenous injection of skiodan.

#### Case Report

On July 1, 1933, Mrs. E. R. P. 31 years old was admitted to the Urological Services of Grady Hospital, complaining of pain in the left lumbar region. She stated that she was well until approximately ten years ago, when she had her first attack of severe abdominal pain. The attending physician diagnosed the condition as kidney colic. Since then she has had repeated attacks and has been treated by several urologists. In 1925, the patient states she underwent an operation for an "abscessed" kidney on the left side. Following the operation her attacks still continued. In 1932, she submitted to an operation for the release of adhesions around the left kidney and ureter, the kidney being anchored at the same time. Neither operation stopped the attacks of severe pain, chills and fever.

On admission she complained of severe cramping pain in the left lumbar region, the pain radiating to the thigh and external genitalia. She had several chills followed by a feeling of warmth. There was also a sensation of fullness in the left lumbar region.

The past history was essentially negative aside from the condition which has been annoying the patient for the past ten years. Venereal infection was denied.

Physical examination revealed marked rigidity of the left rectus muscle, generalized abdominal tenderness most pronounced in the left hypochondrium, and posteriorly in the left subcostal region.

The patient was cystoscoped without difficulty. The mucous membrane was found injected and in some areas edematous. The right ureteral orifice was normal but the left appeared reddened, and surrounded by a hyperemic zone. Number 6 catheters were passed to the renal pelvis without encountering any obstruc-



Fig. 3. Photograph of specimen (left half of horseshoe kidney) after removal, showing congenital displacement of pelvis.

tion. The urine from the right catheter was normal, but a thick cloudy urine was excreted from the left. Microscopically, the specimen was crowded with pus cells and a moderate number of red blood cells. Phenol-sulphonphthalein appeared in two minutes from the right side. There was no appearance of the dye from the left kidney at all. A pyelogram was made and a pre-operative diagnosis of pyonephrosis involving the left half of a horseshoe kidney was made and verified at operation.

The diagnosis was based on the following facts: the kidney was rotated, the calyces pointing mesially and toward the posterior aspect; the renal mass was located close to the spinal column; the lower portion was seen to extend across the lower border of the third lumbar vertebra; the ureter descended from the lateral renal margin.

In order to interpret the appearance of the opposite kidney, a skiodan injection was given in preference to subjecting the patient again to a cystoscopic examination. Although the pyelogram was not very satisfactory, it did show the presence of a renal anomaly.

Operation was performed on July 22nd, under spinal anaesthesia. The kidney was found lying close to the spinal column and apparently fixed in position. By blunt dissection, the adhesions surrounding the kidneys were separated, and its upper pole made free. The kidney was then followed downward, the vessels being ligated and cut as they came into view. A pedicle clamp was then applied, and the kidney separated. It was impossible to deliver the lower pole, due to a band of tissue approximately  $1\frac{1}{2}$  inches wide, apparently fused with the other kidney. It was finally cleared of adhesions, clamped and cut. Interrupted chromic, and mattress sutures were used in closing the divided end of the isthmus. The kidney was then easily delivered and the operation completed in the usual manner. Recovery was uneventful.

The following report was submitted by Dr. Jack Norris of the pathological department.



Fig. 4. Longitudinal section of kidney showing numerous cystic spaces which contained a thick, foul-smelling material.

"KIDNEY: The kidney is dark red in color and has innumerable dense connective tissue attachments to all of its surfaces. It is somewhat ovoid in shape and elongated and flattened, measuring 16 x 7 cms. Its posterior surface is rather firm and resistant. Its anterior surface reveals that there is a congenital displacement of the pelvis, in that the pelvis is uppermost and replaces about two-thirds of the anterior surface of the kidney. At one end of the kidney there is a slight fascial connection, which has served as anchorage to the kidney bed and has presumably connected it with the adjacent kidney. A cross section shows a chronic inflammatory reaction with numerous variable sized cystic spaces, which contain a reddish, thick, foul-smelling material. The pelvis is thick-walled and distended.

IMPRESSION: This kidney is one of a congenital type in which the pelvis of the kidney was misplaced. The organ was also misplaced as concerns its normal position in the retroperitoneal space and its altered blood supply predisposed to the infection and the cystic changes which are illustrated by the photograph."

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## CONGENITAL HYDRONEPHROSIS\*

### Report of Two Cases

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There is surprisingly little written on this subject and much of the literature is not convincing. There are many cases of congenital hydronephrosis reported in the second, third and as late as the fourth decade which lack convincing proof to place them in the congenital category. In some of the late cases reported the investigative data is not sufficiently given to establish beyond question that they belong to the congenital type. I am not referring to cases occurring in early life where the investigators cannot establish a cause or probable cause arising postnatally. These are accepted as cases of congenital hydronephrosis, or of congenital origin.

E. V. Hahn<sup>1</sup> quotes Morris as drawing a distinction between congenital hydronephrosis and hydronephrosis of congenital origin. He considered the term congenital hydronephrosis applicable only to those cases in (which) the individual was born ventricose. Hahn thinks this distinction of slight utility and too arbitrarily drawn. While it is possible for an individual to be born with a small hydronephrosis which presents no evidence of its existence until a few years later, it seems highly improbable that in modern times such a condition is apt to continue on decade after decade unrecognized. It is at times desirable to make the distinction between "congenital hydronephrosis and hydronephrosis of congenital origin" for the latter seems most reasonable and is satisfying in that it explains these later cases which are more often due to developmental defects such as: Aberrant blood vessels, abnormal implantation of the lower end of the ureter, malformation of the kidneys, etc.

The etiology of hydronephrosis has long been one of the battle grounds of urology. In the past it has only been necessary for one to champion a particular cause, for someone

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else to rise up in an attempt to disprove the contentions.

Text books mention that partial or intermittent ureteral obstruction, intrinsic or extrinsic, is the cause of the disease, and the sudden complete and permanent ureteral obstruction does not cause hydronephrosis, but rather an atrophy of the kidney—the so-called autonephrectomy. There is experimental data supporting and contradicting this statement. Linderman's<sup>2</sup> experiments of exclusion of the ureter of six dogs gave him as a final result, three dogs developed hydronephrosis and three atrophy of the kidney. He thought that the difference in the effect of the complete ureteral obstruction were due to compensatory anastomotic circulation established through the vessels of the kidney capsule and also that the continuance of secretion depended upon this anastomosis. Scott<sup>3</sup> and others have differed with Linderman. All of Scott's animals with completely obstructed ureters developed hydronephrosis, the degree depending upon the duration of the obstruction. He furthermore isolated the kidney by surrounding it with a silk sac, and yet hydronephrosis developed, thereby casting considerable doubt upon Linderman's contentions that the establishment of collateral circulation through the capsule was necessary for a continuance of secretion and the development of hydronephrosis. His studies of incomplete ureteral obstruction brought him to the conclusion that the degree of hydronephrosis which followed depends upon the duration of the obstruction and the pressure necessary to force urine past the constriction. Infection is usually present and must influence the process to some degree.

There is no satisfactory explanation of the differences in these experimental results but the divergences should suggest that some other agency or agencies exist in addition to the ureteral obstruction.

Von Bunau and Kermauner<sup>4</sup> have expressed the belief that congenital hydronephrosis does not depend upon the blocking of the ureter, but is due to primary abnormal proliferation of ureter cells and to imperfect development of kidney tissue. No explanation as to how they arrived at this opinion is given.

"When the disease is congenital it usually attains proportionately a much greater size than when it is acquired. Even though the congenital obstruction is caused by an imperious ureter, the kidney does not atrophy, since during intra-uterine life it secretes more slowly than after birth, and consequently intrarenal pressure is not developed with such rapidity to arrest secretion before the delicate pelvic and ureteral tissues have become relaxed and over stretched."<sup>5</sup>

The movable kidney, while not often accepted now by the general profession as a cause of hydronephrosis, is beyond question a factor in its production. This statement does not carry with it the inference that all displaced kidneys become hydronephrotic. It has been pointed out that the statistics of hydronephrosis do not parallel those of movable kidney.

The anomalous blood vessel is not above suspicion. Where it is an etiological factor, the probabilities are that the constant beating of the vessel against the ureteral wall causes first changes leading to stricture of the ureter. The dilatation and sacculation of the ureter and renal pelvis over the aberrant vessel are most likely changes secondary to the stricture of the ureter, or as Quimby thinks, to interference to the transmission of the peristaltic wave.

Anomalous implantation of the ureter into the pelvis as a cause is open to question for when we encounter this apparent condition, the hydronephrotic process has advanced considerably and as the weight has caused the kidney to rotate on its long axis, the ureteropelvic junction, as a part of the rotation, is carried upward in a curved fashion until it appears that there has been a high insertion of the ureter into the renal pelvis. It is more probably an effect rather than a cause.

The more common causes of ureteral obstruction, stones and strictures, are well established causes of hydronephrosis. Whether it is simply the mechanical action of the obstruction which initiates and continues the gradual increasing pelvic retention, or whether there are some other combined influences, seems to have received very little general attention. Geraghty and Frontz<sup>6</sup> think that a not uncommon cause is a thickening or hy-

pertrophy of the "ring muscle" at the ureteropelvic junction and which is due to a congenital defect. There are reports also of hypertrophy of the muscle bundles of the lower end of the ureter causing ureteral obstruction and hydronephrosis. Folsom<sup>7</sup> reports two cases operated upon in which he found this thickening at the ureteropelvic junction. He states that this is often the obstruction found when the dilatation ends abruptly at this area.

W. C. Quimby<sup>8</sup> has offered a suggestion which seems quite plausible. He believes that in the dynamics of the ureter and pelvis may be found a potent cause of pelvic retention. He cites an old experiment of exposing the ureter of an animal transabdominally, and a bit of silk passed around it, without otherwise dislocating or interfering with the ureter itself, and such thread be tied so loosely as in no way to constrict the lumen of the tube, there will follow a gradual hydronephrosis of the kidney drained by this ureter. Why this should occur, I do not know, but it is interesting to speculate. That this foreign body acts on the ureter mechanically, or as an irritant interrupting the peristaltic wave seems probable. It is likely that the same interference to the transmission of the rhythmic persistalsis occurs in any of the forms of ureteral obstruction, whether by pressure, or by inflammatory changes which result in fibrosis and diminished elasticity of the ureteral wall. This adynamia, while possibly a by-product of ureteral obstruction, is probably a determining factor in the production of hydro-nephrosis.

There are many other causes of hydronephrosis mentioned, such as: Persistence of foetal valves, folds, kinks and twists of the ureter. Even lesions of the spinal cord have been accused but so far as I can find, there is no evidence to sustain such an accusation.

#### Case Reports

Case No. 1: B. B. F., colored male, admitted to the hospital on January 27, 1932, a few hours after birth. The physician who delivered the baby noticed at the time the tremendously distended abdomen. After admission, the abdominal distention diminished a little. The abdomen became relaxed, flabby and the skin was wrinkled. Practically no abdominal musculature could be demonstrated. In each upper abdominal quadrant could be felt a large nodular mass, somewhat

the shape of the kidney and apparently fluctuant. These masses were freely movable. The right mass was the larger. From time to time distention and relaxation of these abdominal masses occurred.

A tentative diagnosis of congenital hydronephrosis was made. Polycystic degeneration of the kidneys was considered.

Two attempts at intravenous urography were made but failed. On one occasion the needle inserted into the anterior fontanel passed through the sinus and the injection was made into the subarachnoid space. X-ray revealed the outline of a portion of the brain. The only apparent reaction to this accident was a transitory nystagmus and kicking motion of the thighs. Apparently no harmful effects followed. The flat plate showed enlarged flanks with no identification of shadows. Apparently no Skiodan entered the kidney pelves.

During the first part of his stay in the hospital, he gained weight, but later he gradually lost this and died on April 11, 1932.

#### Blood chemistry:

Urea nitrogen: 26 milligrams per 100 c. c. of blood.

Sugar: 44 milligrams per 100 c. c. of blood.

Chlorides: 420 milligrams per 100 c. c. of blood.

Blood Wassermann: Negative.

Urinalysis: Specific gravity: q. n. s.; Albium: xxx; Pus: xxxx; otherwise negative.

Autopsy Anatomical Diagnoses: Hydronephrosis, bilateral; Kinked ureters; Congenital syphilis; Cystitis, chronic; Pyelitis, chronic.

G. U. tract: The bladder wall was thick and tough. Urine easily expressed through the urethra. Orifices of ureters open. Ureters enormously dilated and numerous sharp angulations. Both kidneys dilated and distended with turbid urine. Kidney parenchyma entirely destroyed leaving only a bag of urine. Numerous adhesions from bladder, ureters and kidneys to parietal peritoneum and other abdominal viscera.

Microscopic examination: The bladder showed marked fibrosis of wall, particularly of the inner and outer coats; thickening of wall including musculature; some round cell infiltration; numerous rather large areas of dense calcification apparently in tissue or vascular spaces in the submucosa.

Kidneys: Chronic fibrosis and round cell infiltration of pelvis and fibrous thickening of capsule; cellular reticula increase in kidney, particularly in pyramids, with apparent interference with tubules; some dilatation of cortical tubules.

Brain: An area of necrosis with yellow discoloration in left cortex near longitudinal fissure (probably due to the extravasation of Skiodan).

Case No. 2. J. E., colored male, four months of age; admitted to the hospital on October 6, 1932. The history is that the baby nursed poorly and vomited after each feeding. The mother seems not to have noticed the abdominal distention. On admission, the abdomen was markedly distended and palpable



masses were felt throughout the abdomen. What were taken to be intestinal coils were visible. The bladder was distended and catheter could not pass through the urethra. The pediatric and surgical service made a diagnosis of intussusception. Abdominal exploration revealed a markedly distended bladder and kidneys; the kidneys were described as soft sacs containing very little solid material. The patient died October 12, 1932, five days after operation.

Urinalysis: Voided specimen; acids; specific gravity—q. n. s.; albumin—xx; epithelium—xx; pus cells—xxx.

Autopsy Anatomical Diagnoses: Kinks of ureters; Pyonephrosis, bilateral; Congenital syphilis of lungs, kidneys and bladder.

The region of cystotomy was surrounded by fresh adhesions and some sloughing around bladder incision. The bladder was empty and the walls were apparently edematous with hemorrhagic mura. No evidence of stricture or malformation of the urethra was found. Patency could not be tested by forcing urine from bladder on account of cystotomy opening but a small probe passed to bladder readily. Urethral mucosa was hemorrhagic and edematous. Both ureters were very large and showed multiple acute angulations throughout their length and were closely entwined by peritoneal folds and adhesions. Both kidneys were as bags of fluid. No urine could be forced through left ureter but a fair stream was obtained by pressure on right kidney. On opening, the kidneys were found to be multilocular sacs filled with turbid, foul urine.

Microscopic examination showed profuse granulation and round cell infiltration about dilated calyces of the kidney and pelvic epithelium was entirely absent. There were fetal granulations throughout substance of kidney with poorly developed glomeruli and hyaline substance in spaces of Bowman. The tubules were distorted by overgrowth of granulations. The bladder wall was thickened by active granulations of fetal type with round cell and mononuclear infiltration, the mucosa degenerated and desquamated.

Ureter walls were thickened by the same process as seen in bladder wall. The urethral mucosa was entirely denuded from fresh injury.

### Conclusions

1. Two cases of congenital hydronephrosis are reported in which syphilis seems to have been the cause of ureteral changes leading to the kink and obstruction.

2. The mechanics of hydronephrosis are not yet thoroughly understood. There is great variation in the results of experiments by different investigators studying hydronephrosis.

3. It seems probable that it is not the simple mechanics of ureteral obstruction alone, which is the cause of hydronephrosis, but most likely a combination of agencies

acting as a whole, which brings about the end results.

4. The literature records many cases of congenital hydronephrosis that are not accompanied by data sufficiently convincing to place them in the congenital category.

5. If the simple tying loosely of a thread about the ureter, or the application of a carbolic acid solution around the ureter, can impede or interrupt the ureteral peristalsis, and eventually produce an hydronephrosis; why can not the same interruption of the peristaltic wave occur where there is ureteral fibrosis, loss of elasticity, extrinsic pressure, or irritation as from stone, and become a determining factor in the production of hydronephrosis?

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### EMORY ALUMNI WEEK

For fifteen years past there has been at stated times, a get-to-gether of the Alumni of Emory to which has been invited the physicians of the state, the purpose of the meeting being five days of intensive postgraduate study. The clinics held have been of great benefit to our physicians and through them to the citizens of the state. Each of these days has been full of varied information. When the clinics were first put on, much time was devoted to venereal diseases. In recent years a general clinic program has been the order, with lectures by the faculty of Emory and other medical men.

The Emory Alumni Week this year will begin at 8:00 on the morning of June 5. The course will go right on through Friday, and on Friday evening, the 8th, at 7:00, the annual banquet will be held to which will be invited the visiting physicians who are not Alumni and the graduating class. One or more special speakers will make addresses.

The place of registration will be at Colored Grady, as will be all the lectures. Clinics will be held at Grady Hospital. The surgical clinics will be between the hours of 8:00 and 10:00 each morning. A full program will be mailed Georgia doctors in a few days.

Following the clinics and banquet the Annual Day at Emory University will be the attraction. Saturday, June 9, the University invites everyone to attend.

Several hundred physicians always attend the clinics and we feel sure that this year will see a much larger number here than for several years.

Make ready and be in Atlanta for the entire week. Dr. M. C. Pruitt, Mortgage Guarantee Building, Atlanta, is the secretary.

## A CLINICAL CONSIDERATION OF MOVABLE KIDNEY\*

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I would like to preface my brief remarks upon the subject I have chosen to discuss by expressing to you, of the Georgia Urological Association, my deep appreciation and gratitude for the honor and privilege of being invited to appear before you at this time. Such an organization as you have perfected, with annual or semi-annual gatherings for scientific discussions and an opportunity to enjoy much needed relaxation, can only be productive of a closer feeling of friendliness and a stimulus to greater scientific endeavor. It affords a still further opportunity, in that the expressions of individualism can be moulded by discussion into the more unified and more precise expressions of collectivism, without suppression or discouragement of individualistic ideas.

It is not my purpose at this time to delve into the many hypotheses and theories relating to or concerning the kidney which is movable, and productive of subjective and objective symptoms. I desire only to present, as concisely as possible, the pertinent facts underlying the proper diagnosis and successful management of the condition, with particular reference to the surgical treatment.

Movable kidney, or using the more descriptive anatomical term, nephroptosis, is said to be one of the earliest medical problems recognized by the ancient practitioners of the healing art. Presumptive evidence has been discovered among the statuary of the early Egyptians that has led to the belief that the condition, as a cause of more or less distressing symptoms with attendant disability, was quite well known at that time.

The first mention in the literature of the surgical treatment of movable kidney was made in relatively recent years. Since that time this type of treatment has been treated with such indifference at one time, and enthusiasm at another, that the surgical history of nephroptosis can truly be divided into dis-

tinct periods of renaissance, and equally distinct periods of obsolescence. Investigation of the general trends of medical thought during this period of time shows most decidedly the varying cycles of radicalism and conservatism, including the treatment of not only such a condition as the one here described, but of other therapeutically debatable conditions such as peptic ulcer.

Up until the visit of Mr. Frank Kidd to this country in 1931, and the subsequent presentation of his most excellent contribution in the form of the Robert Guiterass lecture, the operation of nephropexy did not occupy a very enviable position in the field of surgery, and was being only occasionally performed. This wane in popularity can be directly traced to the large literature on the subject that had been published decrying and condemning the procedure as being of little therapeutic value. Only very recently did one of our prominent urologists evince great surprise at so much as the subject being opened for discussion, and questioned the wisdom of bringing back into the light something that had been dead and buried for these many years. He went further to present a convincing array of statistical evidence to support his contentions, but failed to give account of probable reasons for the unsuccessful results obtained by the operation. No mention was made of what diagnostic studies preceded the operation, or who performed the nephropexy. Such contentions are, however, not convincing, for a vast difference exists between the results obtained following the thorough pre-operative study of the patient with pyelography and its various ramifications, with the operation being performed by a surgeon particularly well versed in the anatomy of the kidney and its adjacent structures, and those obtained by the casual operator whose diagnostic measures are limited to being able to palpate a movable lump in the side of the abdomen. It seems most illogical, and certainly unscientific, to allow an influence based more upon simple prejudice than careful investigation, to prevail in the realm of surgery, and thus deprive deserving patients of a valuable therapeutic measure.

It is quite true that at times in the past

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nephropexy has been unfortunately hailed as a cureall for innumerable symptoms in the right abdomen, not at all associated with the urinary system. As a result, in many instances it was necessary to later remove a diseased appendix or gallbladder or remove an ureteral calculus before a complete cure was effected. It is naturally of much consolation to the urological surgeons that the greater percentages of the failure to relieve symptoms by suspension and fixation of the kidney cannot be charged up to them.

The few who have consistently condemned the procedure have done so more as a result of the study of large numbers of cases selected at large as part of a routine study, than from their own personal surgical experiences. Such an attitude and such wide differences of opinion only tends to stimulate more careful work and more thorough investigation, and to settle finally, once and for all, the merits or demerits of any given procedure. It is only necessary to recall to memory an article on prostatic resection published a little over a year ago, in which the opinions of numerous urologists about the country were assembled together. In this particular article every contributor steadfastly denounced the procedure, in no uncertain terms, as being highly dangerous with the end results not satisfactory enough to warrant the risk, and further stated that the procedure could only be used in a few carefully selected cases. At this time, it is definitely known that 90 per cent of all those who vowed against prostatic resection are now performing resections themselves, and the others are undoubtedly having them done by other operators. Necessity is quite apt to make an adept pupil and be productive of great skill in many lines of endeavor.

Ptosis of the kidney, with definite symptoms, is a condition encountered almost exclusively in females being 20 times more common than in males. Statistics, collected at large, revealed the fact that from 15 to 20 per cent of all females have movable kidneys of one type or another, but that only 2 to 4 per cent of all patients with movable kidneys exhibit symptoms which can be directly traced to the faulty kidney. It is said to be always acquired and never congenital,

excepting those rare cases in which the kidney does not ascend the full normal distance. In almost every instance the right kidney is the one affected. This is most probably due to the large right lobe of the liver immediately overlying the kidney and also to the fact that the hepatic flexure of the colon is quite lacking in sufficient mesenteric supports, and very often sags at this point. A pull downward is thereby produced on the perinephritic capsule to which the posterior parietal peritoneum is attached.

The type of individual in which the condition is most commonly found has become almost classical in physical characteristics. The chest is narrow and flat, the abdomen is rather long and likewise narrow, usually with strong abdominal muscles of good tone, and a nervous system which is weak and unstable. It is highly probable, however, that a large majority of these patients began to exhibit symptoms of "neuresthenia," if the term be acceptable, as a sequence of the suffering associated with the condition rather than as a pre-existing condition.

Another type in which nephroptosis is encountered, and in many instances with both kidneys involved, is the one in which there is general relaxation of the abdominal muscles, associated with splanchnoptosis following childbirth. This type is most generally treated by conservative measures, and only in unusual cases, where the prolapse profoundly endangers the integrity of the kidneys, is operation resorted to. The wearing of an abdominal corset, with the view of increasing the intra-abdominal pressure and thus support the kidneys along with the other intra-abdominal viscera, is usually the treatment of choice.

The direct cause of renal ptosis is generally conceded to be trauma, whether it be sudden as the result of an injury, or produced by a severe chronic cough. Many patients have been able to date their complaint from the time of some violent strain or accident.

The mechanism involved in the actual production of a movable kidney necessitates an explanation of the anatomical changes and other co-existing factors that allow such a malposition to take place.

Nature has carefully protected the kidneys,

because of their very essential function in maintaining life, by placing around them a firm layer of fatty tissue known as the perinephritic fat. This fatty layer is rather loosely attached to the true renal capsule and to the perinephritic fascia with which it is surrounded, the perinephritic fascia being derived from the lumbar fascia. Coursing through this fatty layer are numerous strands of fibrous tissue, which are attached at one end to the perinephritic fascia, above, and at the other to the kidney capsule. In this way the kidney is actually suspended in its bed of fat in such a way that it is quite amply protected from external violence.

By the above description it would seem almost impossible for a kidney to become movable to any considerable degree, owing to this peri-fascial support which is fixed and does not move with respiration. It is at this point that Mr. Kidd has given us additional anatomical information, gathered at the operating table, that is of tremendous value in understanding how the kidney is able to assume a lowered position. He has observed that the posterior parietal peritoneum splits into two layers, an anterior and posterior layer, the posterior layer uniting with the posterior part of the perinephritic fascia, whereas the anterior layer does not unite with the anterior part of the fascia, but continues down to a point about one inch below the lower pole of the kidney, forming more or less of a pocket or tunnel along the ureter where it finally merges with the posterior layer of peritoneum. It is thus seen that the kidney is quite adequately supported from every angle except at this one point along the ureter. It is, therefore, readily seen how easy it would be for this pocket to herniate downward because of the weight of the kidney above and thus increase the range of mobility of the organ.

The effect of sudden or continued trauma to the area causes the supporting fibrous bands, which course through the perinephritic fat, to stretch and become loose. The kidney increases its range of motion, which in turn causes the absorption of the perinephritic fatty envelope, and subsequent fibrosis ensues. This fibrosis produces adhesions, principally about the lower pole of the kidney, which prevent

its proper upward respiratory excursion and is likewise the cause of the upper ureter becoming fixed in a more or less kinked position by the formation of peri-ureteral adhesions, which in turn interferes with proper drainage, and produces stasis with attendant kidney damage. The pedicle of the kidney is elongated because of the increased tension of its weight, which produces, together with inadequate pelvic drainage, the pain so characteristic of a ptosed kidney. As time goes on and the traumatic factors continue, the kidney drops lower and lower until, in many cases, it is found well within the bony pelvis with the patient in the standing position.

A kidney which undergoes such changes in position will forever be a movable kidney until it is corrected by proper surgery. Palliative measures may relieve the condition temporarily, but rarely if ever is permanent relief obtained.

Time will not permit a discussion of the various symptoms, and symptom complexes, associated with nephroptosis, but suffice it to say that a proper appraisal of the patient's complaints may, at times, be found to be quite difficult. Care should be taken at all times not to be misled by symptoms alone, without the finding of corresponding pathology, which would warrant surgical intervention. A misstep from this rule will likely be productive of unsatisfactory operative results.

The diagnosis of movable kidney is usually quite readily made by the palpation of the kidney in both horizontal and upright positions. The next question is to establish the fact as to whether or not the subjective symptoms and objective findings justify operative treatment for making the correct decision depends largely upon whether or not the end results will be a success or a failure. It is hardly necessary to call attention to the importance of weighing carefully the patient's symptoms with or against the evidence obtained by use of the ureteral catheter and roentgen ray. Symptoms may be typed as presumptive evidence and pyelographic findings as conclusive evidence. A very safe rule to follow in this regard, which generally holds true, is to never operate upon a movable kidney which does not show evidence



of urinary back-pressure manifested, usually, by pyelectasis of some degree.

The patient should first be subjected to a plain film of the region of the kidneys, ureters and bladder to rule out possible urinary calculi or even biliary calculi which at times may play an important part in the symptomatology. The kidney urines should be studied separately for evidences of infection and if advisable cultures taken. In my own practice I never fail to investigate very thoroughly the caliber of the ureter on the side involved with a good sized ureteral bulb. In the past few years I have discovered, in two patients with movable kidney, very definite strictures in the lower ureter, one determined before the nephropexy and the other afterward. Needless to say the one located after the operation was the result of a search to find out why the patient still insisted that the operation had not completely cured her difficulties as had been promised.

Pyelograms should be made with the patient in the Trendelenberg position, in order to determine the maximum upward excursion of the kidney, and likewise in the upright position, preferably standing. In this maneuver the Woodruff catheter used on the suspected side answers a great need in that it allows the entire ureter and kidney pelvis to be filled with contrast fluid with the absence of any foreign body such as the ordinary ureteral catheter which might serve as an irritant and produce spasm.

A study of the emptying time of the pelvis of the kidney is a factor in diagnosis which is of greatest importance, and serial pyelograms will aid greatly in this determination. An emptying time of greater than ten minutes is considered pathological. Where the emptying time has been greatly increased it is well to estimate the kidney function by the use of phenolsulphonephthalein or indigo carmine.

Another test, and probably the oldest in use, but one which I consider important, is to determine whether or not the patient's symptoms are relieved by the recumbent position and aggravated by standing.

If the patient is carefully studied by these above named diagnostic procedures, and is

found to have ample reason for symptoms, together with definite kidney damage present, I see nothing to be gained by the use of palliative measures such as wearing a kidney belt in the hopes that the kidney will stay in place after the belt is removed. If, however, the findings do not prove conclusive enough to justify operation immediately, I do feel that conservative measures such as well supervised abdominal exercises and the wearing of a well fitted kidney belt with pad should be given a fair trial of at least six months to a year. Having the patient increase in weight in the hopes of anchoring the kidney is largely a fallacious belief. Fat may be added to the body in general, but as rapidly as it is formed in the perinephritic space it will be absorbed by the movements of the loose kidney and more fibrosis will take place, but not in a position where it will replace the destroyed fibrous bands which acted originally as kidney supports.

A word here about the type of kidney belt and its application to the patient does not seem amiss. It is my feeling that every surgeon should have a close association with some reliable corsetier or surgical appliance department so that his patients will have proper fittings. The proper support should be selected and carefully moulded to the patient's body by painstaking alterations so that the support will fit properly and be comfortable. The kidney pad, if used, should be of the size which will rest comfortably in the right upper abdomen and should preferably not be the ordinary pad made by the manufacturer, which is usually quite hard and unbearable. I have found that the common ovoid rubber sponge, properly covered, makes an excellent kidney pad. It is needless to mention here the instructions to the patient in how to properly apply the support.

After the patient has been carefully studied and it has been found that relief has not been obtained by wearing a support for a reasonable length of time, operative interference would be deemed justifiable. The different types of operations, all with their particular therapeutic and physiological claims, are too numerous to mention. Hardly anyone writing on the subject of nephropexy fails to add

something which is a variation from the accepted surgical version at that time.

A detailed description of the operative technic is quite familiar to you all and seems unwarranted of repetition at this time. There are certain features, however, by reason of their importance, which seem eligible for review.

There are, happily enough, certain cardinal requirements of the procedure of artificially anchoring the kidney. If these are met, success will obtain in the large percentage of cases and unpleasant results will follow if they are disregarded.

These requirements I will discuss in the order in which I consider their importance:

1. The kidney should be anchored quite firmly in a high enough position so that the upper ureter can be seen to be free of all kinks and in straight line.

2. That all fat should be carefully removed from around the kidney, upper ureter and kidney pedicle.

3. That in opening and closing, every precaution for the ultimate preservation and function of the 12th dorsal, the ilio-inguinal and ilio-hypogastric nerves should be taken. If these nerves are damaged, there will be post-operative pain, areas of hypesthesia, and a laxity of the right abdomen will develop which will only help to defeat the operation.

4. The proper post-operative care of the patient. For ten days to two weeks following operation the foot of the bed should be elevated at least 10 inches. The patient should be encouraged to lie on the operated side as much as possible and never on the opposite side. At least four weeks should be spent in bed and abdominal exercises to strengthen the muscles, if necessary, should be instituted. The patient should spend a very guarded convalescence and abstain from heavy work or violent exercise of any type. I have always found that patients derive much comfort and additional security following operation by wearing some type of abdominal belt. In from six months to one year the operated kidney should be checked by pyelogram in the upright position to ascertain its position.

If these above requirements have been carefully fulfilled the chances are that the kidney will be found in the desired position, and the patient will be free of the discomforting symptoms which were noted before the operation, with the faulty kidney in such physiologic position as will insure its continued normal function.

In conclusion, may I thank you for your patience in listening to this rather sketchy abstraction of movable kidney and again I wish you to know of my appreciation of the kind invitation that has been my privilege to enjoy.

## CONGENITAL DISLOCATION OF LENSES

### *Hereditary Influences*

STACY C. HOWELL, M.D.

*Atlanta*

Hereditary influence is known to be a factor in congenital dislocation of the crystalline lens. The cases presented show an unusual array of anomalies in one family, which despite their different natures are nevertheless closely related to dislocation of the lens.

Etiologically a distinction is made between congenital and acquired dislocation of the crystalline lens. Congenital dislocation is usually a lateral or upward displacement (subluxation), caused by unequal width of the zonula in different meridians. Most frequently the lens is found to be displaced upward, the fibres of the zonula being shortest above and longest below. (Case 1). Usually, too, the volume of the lens is somewhat smaller. In after years the ectopia usually increases (Case 4), and even passes over into a condition of total luxation. Congenital ectopia of the lens is ordinarily bilateral and symmetrical.

*Case 1:*—P. W., a child of six years, was first brought to me in June, 1932. Her mother had noticed that the left eye deviated outward and that the child frequently stumbled.

The vision in the right eye was 20/200; in the left eye 1/200 with the illiterate "E" chart. There was a divergent strabismus of 22 to 25 degrees, the left eye being constantly deviated, the right eye fixing. Tremor of the iris (iridodonesis) was noted in the left eye only. Otherwise the eyes were externally normal.

*Ophthalmoscopic:* With mydriasis, the lens in the right eye was seen dislocated directly upward so that its lower margin was 2 mm. above the lower border of the widely dilated pupil. All media were clear and the fundus could be seen either through the lens or through the aphakic portion of the pupil. The fundus was normal.

*Slit Lamp Examination:* The zonular fibres could be seen extending from the lens outward radially. None of these were ruptured, but they were pulled quite taut below and were of unusual length along the lower margin of the lens. The fibres in the upper half were behind the iris and could not be seen. The left eye was exactly similar to the right.



When refracted the following error with designated improvement in vision was found:

O. D.—1.00—8.00 cyl.  $\times 15=20/30$

O. S.—1.00—6.00 cyl.  $\times 180=20/50$

With this correction she is able to continue her school work satisfactorily. The divergence is decreased to from 6 to 8 degrees. Occlusion of the right eye for one hour daily is practised for the purpose of increasing the acuity of the left eye and the prevention of amblyopia. If the eyes do not become straight under this treatment surgery of the muscles may be necessary.

*Case 2:*—Mrs. W. was P. W.'s mother and was 30 years of age. Thorough study of this patient's eyes revealed only a myopia of three dioptres which was corrected by the necessary lenses.

*Case 3:*—J. L. P., a maternal uncle of P. W., died at the age of eighteen of tuberculosis of the femur. A record of the examination of his eyes by Dr. Wm. E. Campbell, Jr., February 21, 1928, was found as follows:

The eyes were externally normal. The corneas were of normal size and the anterior chambers of normal depth. Oblique illumination showed a recession of the iris and possibly an absence of the pupillary border in the lower quadrant of each eye. (Coloboma of the iris.) The lower quadrants of both lenses showed considerable opacification. This, however, did not extend upward high enough to interfere with vision. With compound minus lenses the vision was brought to 20/20 in both eyes. (Although the fundus was not described, a large coloboma of the choroid is unlikely with this vision.)

*Case 4:*—T. P., aged 59, was the maternal grandfather of P. W. and father of the second and third patients. Both eyes were externally normal. The corneas were clear and the anterior chambers were of normal depth. The irides were tremulous. Both lenses were displaced upward so that the lower margins were barely visible encroaching upon the undilated pupil. Under mydriasis it was discovered that both lenses were completely opaque with no zonular fibres visible at the lower margin. In the right eye the vitreous showed the results of iridocyclitis with numerous large and small opacities partially obscuring a normal fundus. The left eye showed a more marked old iridocyclitis the fundus being obscured by numerous vitreous opacities. Aphakic refraction gave him 20/50 vision in the right eye. He was able to count fingers at 2 meters with the left eye.

*Case 5:*—Mrs. J. P., aged 75, was the maternal great grandmother of P. W. The relationship of this subject whose descendants showed these abnormalities suggested thorough examination. However, her eyes were normal for a woman of seventy-five years.

### *Comment*

As to the treatment of these cases, only the little girl and the grandfather need be con-

sidered here. Of the others, one has simple myopia which has been corrected (case 2), one is dead (case 3), and the third has normal eyes requiring only presbyopic correction (case 5).

The disturbance of vision which develops in subluxation of the lens, insofar as it consists of myopia and regular astigmatism, can be corrected by glasses. If the dislocation of the lens is so great that a part of the pupil is aphakic, we have the choice of correcting either the aphakic portion of the pupil with a convex glass or the portion of the pupil that contains the lens with a concave glass. We recommend to the patient the form of correction which gives the better vision. Sometimes, for the sake of better vision, it is best to enlarge the aphakic portion of the pupil by an iridectomy, and so make the eye like one destitute of a lens.

Treatment in those cases in which the dislocation of the lens entails no further injurious consequences than the disturbance of vision, consists in the prescribing of suitable glasses. In those cases in which the symptoms of iridocyclitis or of secondary glaucoma are caused by the displacement, extraction of the lens, if feasible, is indicated. In subluxation, extraction is often difficult or even fails altogether, because of vitreous prolapse occurring through the defective zonular structure. Discussion of a subluxated lens may be tried, but it is not often successful, because the lens, being imperfectly attached, gives way before the discission needle. In cases in which the removal of the lens is difficult or impossible, all we can do is to combat the inflammation or the increase in tension by means of an iridectomy. Luxation of the lens into the anterior chamber is an absolute indication for its surgical removal.

Refraction through the lens with compound minus glasses was found to be the most satisfactory for the little girl (case 1), while in the case of the grandfather (case 4), refraction through the aphakic portion of the pupil gave the best vision. Surgery in the form of extraction of the lenses, or in the form of iridectomy was considered inadvisable at this time in both cases.

## SOME PRACTICAL POINTS IN THE DIAGNOSIS OF PULMONARY DISEASES\*

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I have decided to present some practical points in the diagnosis of pulmonary diseases that I have gleaned from a number of years of special interest and work in this field.

It is needless to state that a well taken history is of paramount importance in the diagnostic approach; but in this group of diseases there are a few points in the history which I should like to stress. One of the most troublesome and most frequently encountered symptoms is cough. Its duration, character and whether or not productive deserve a detailed inquiry. A cough of several days' duration carries with it a significance vastly different from that of a cough lasting several months or years. The former suggests an acute disturbance of the upper respiratory tract, while the latter imposes upon you the consideration of a more profound and chronic disorder. It is a safe rule in any cough lasting over three months to consider pulmonary tuberculosis a strong probability. The character of a cough may frequently furnish helpful suggestions as to its origin or cause. If the patient is not coughing at the time of your observation, have him do so. The violent episodes of pertussis, the hard rasping cough of measles, the slight hacking cough of early tuberculosis, the frequent, and at times incessant, cough of pleural irritation, the shallow, restrained cough of pneumonia, the hard and frequent cough of laryngeal and tracheal inflammation, the croupy barking cough of acute bronchitis and the brassy, stenotic cough of mediastinal pressure are quite characteristic. A cough upon retiring is common in lesions of the upper respiratory tract, one during the night and early morning suggests pulmonary tuberculosis. The cough in early tuberculosis is not productive, and in beginning tuberculosis there is no cough. Severe cough, with much expectoration, when due to tuberculosis,

means an advanced stage of the disease. Cough accompanied by considerable mucoid expectoration and particularly when limited largely to the morning hours, strongly suggests bronchial affections. Such a picture is seen in the bronchial catarrh of excessive smoking, and in associated diseases of the paranasal sinuses. I should like to stress the importance of a thorough investigation of the paranasal sinuses wherever there is a chronic productive cough. A severe cough accompanied by copious and foul sputum usually means lung abscess, bronchiectasis, pulmonary gangrene, and more rarely, ruptured empyema or hepatic abscess. This cough is typically paroxysmal and is influenced by the patient's position. Generally, lying upon the sound side aggravates or initiates the paroxysms,—but at times the reverse is true. Such a picture in a young child calls for the consideration of an aspirated foreign body. In many instances the cough of a so-called bronchitis will clear up with the administration of digitalis, for in many such cases the trouble is in the myocardium and not the lungs. The diagnosis of chronic bronchitis should be made with a modicum of caution for a more thorough investigation will reveal an overlooked tuberculosis, an early bronchiectasis, pulmonary neoplasm or a weakening heart muscle.

A most significant symptom is hemoptysis, which should always be considered due to tuberculosis until proved otherwise. This diagnosis, except in such obvious instances as traumatic chest injuries, pneumonia and so on, will be correct in ninety-five out of a hundred times. Therefore the frequency of obscure blood spitting being due to pulmonary tuberculosis is apparent. Likewise, the history or occurrence of an acute fibrinous pleurisy is presumptive evidence of a tuberculous infection. I do not of course refer to the pain in the chest that is loosely diagnosed a "touch of pleurisy." Where an effusion forms, the chance of a tuberculous etiology is greatly increased, and thoracentesis reveals the usual straw colored fluid. I handle every case of acute pleuritis, where there is no other obvious cause to be found, as a case of minimal pulmonary tuberculosis, and commend this policy to you. Failure to

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make such observance will often invite disaster and in one to several years after this attack of a simple pleurisy, these patients will return to you showing moderate to far advanced pulmonary disease.

Unexplained fatigue, vague and persistent chest pains, particularly in the region of the shoulder girdle, and the gradual loss of weight not properly accounted for, are symptoms of early tuberculosis that have not received sufficient emphasis. This last symptom, gradual loss of weight, is, I think, one of the most important in all internal medicine.

Some of the important points in the physical examination to which I wish to refer will appear, I feel, to be rather elementary. They are, but being of such practical import, I take the liberty of calling them to your attention. The cardinal principles in making the physical examination are, four—relaxation, concentration, skill in technic and skill in interpretation. Both patient and examiner should be in as comfortable a position as circumstances will permit. Relaxation of the patient is essential to a satisfactory examination of the chest: tense and contracted muscles preclude it. Tenseness hinders proper percussion and palpation and may occasion adventitious skin and muscle sounds. A few moments spent with a co-operative patient will result in the muscles of the neck, chest, back and shoulders being relaxed. Make sure there is no constricting clothing about the waist. Sounds transmitted from them may easily be erroneously interpreted as a friction rub. Whenever possible, the chest should be examined in the upright position. When the patient is very ill, examine the posterior aspect of the chest with him lying first on one side and then on the other, comparing only the uppermost sides.

The lack of concentration in making the examination is the "looking up" in golf. To concentrate is advice easily and readily offered; but its abuse is notoriously indulged. How frequent it is, while shifting the bell of the stethoscope from place to place on the chest for our thoughts to wander astray—to our golf plans for the afternoon, the game of bridge last night or perhaps an interesting operation that morning. How common a sight

to see the examiner, while in the midst of supposedly delicate percussion, carrying on a conversation with someone nearby or even with the patient. A satisfactory chest examination can not be made thus. The remedy is concentration—see what you are looking at, hear what you are listening to, feel what you touch.

Consummate skill in the technic of examination comes only after considerable practice with meticulous attention to detail. Its exhibition embodies deftness, delicacy and even a certain daintiness. The interpretation rests upon a basic knowledge and accrues only after years of experience.

It is not within the scope of this paper to launch upon a discussion of physical diagnosis. I should like merely to emphasize a few points of practical value. First of all, the importance of the expiratory cough. The rales of an infiltrative lesion are best produced in this way, and in most instances are heard only in this way, being heard either during the short cough at the end of expiration or during the sharp inspiration following it. A little coaching will usually teach the patient how to co-operate. When this is difficult, have him count in a whisper up to ten, then take a short, quick breath. The best method for detecting beginning pneumonia or picking up isolated consolidations is by the use of the whispered voice. Pass the stethoscope over the entire chest while patient whispers one, two, three. The high pitched breath sounds or ventriloquy will be easily heard. An area of consolidation, the size of a fifty-cent piece can readily be detected. The spoken voice is an aid in determining the level of a pleural exudate. Begin at the apex and proceed downwards—the point at which the vocal resonance becomes nasal will not be far from the upper level of the fluid. Percussing and measuring that saddle-like area of resonance over the apices, what is called Koenig's isthmus, is of definite value in apical disease, but calls for considerable delicacy in technic. A measurement of less than 5 cm. tends toward the abnormal. Comparing the excursion of the lung bases in extreme inspiration and expiration, or what is known as tidal percussion, may indicate basal disease, adhesive pleurisy or trouble below the

diaphragm as subphrenic or hepatic abscess. At this point may I emphasize one or two points in the art of proper percussion? First, the sensation of resistance to the fingers is as important as that of hearing. A deaf person could percuss with a considerable measure of proficiency. The pleximeter finger should be placed snugly and evenly upon the chest and free of tension. A wrist movement is used, and not the forearm. The stroke should possess a precise and staccato quality.

Numerous moist rales heard during quiet respiration generally indicate secretion in the bronchi or a massive ulcerative lesion in the lungs. If the rales are metallic or consonating, the latter condition is suggested. Whistling, wheezing, sibilant, sonorous rales indicate a diffuse disturbance throughout the bronchial tree, as seen for instance in asthmatic bronchitis. Dr. Chevalier Jackson stresses the association of sibilant rales with intra-bronchial neoplasms and urges bronchoscopic examination in such cases. The most dependable sign for cavity formation, in fact, pathognomonic, is the sharp suction sound immediately following a moderately forced cough.

After a thorough inspection and palpation of the chest, I think it well before proceeding to an examination of the lungs proper, to next determine the condition, size and position of the heart. Palpation of the trachea in the suprasternal notch to detect any deviation to the right or the left, should be done. The orientation of the heart and trachea is most useful in differentiating fluid from thickened pleura. Likewise in massive atelectasis, the retraction of the heart and mediastinum to the affected side is characteristic. Inspect the tips of the fingers in every patient you see. A casual glance may focus your attention upon the chest by revealing anything from a slight curvature of the nails to the other extreme, clubbed or drum stick fingers. A forward and lateral curvature of the nails, sometimes resembling the beak of a bird, is very frequently seen in chronic pulmonary conditions as tuberculosis, bronchial asthma and chronic bronchitis. The clubbed fingers usually indicate chronic pulmonary suppuration as bronchiectasis and lung abscess.

They are seen, in extreme degree, in congenital heart disease.

A small pleural effusion is frequently overlooked. Dr. Osler stated that it was the most frequently overlooked condition that he noted in his consultation practice. In addition to the classical signs-flatness on percussion, absent breath sounds and fremitus and dislocation of the heart, I wish to stress the sign called Grocco's sign. It is a triangular area of dulness at the opposite base, and its size varies with the size of the effusion. In young children and in thin young adults, do not be guided too much by the breath sounds, for in these patients the breath sounds may be well transmitted, even bronchial. The most reliable sign here is the wooden flatness of the percussion note. It is well to remember that the fluid in children under ten years of age is usually purulent. Whenever fluid is suspected, a chest tap should be done. I strongly advise it in pneumonia when the fever or physical signs persist too long. Puncture of a pneumonic lung is without danger, but the detection of an empyema is important. Note this, so-called unresolved pneumonia means, nearly always, pus somewhere. A diagnostic puncture for lung abscess is a laudable procedure, but exercise considerable care not to spread infection by tracking pus along the needle path.

Injecting air into the pleural cavity may be extremely helpful in delineating and locating a tumor of the lungs or chest wall. It should be attempted only by those expert in the technic.

The increasing use of the injection of lipiodol to reveal empyema cavities, pus pockets, lung abscesses and bronchiectatic dilatations, speaks for its practical value.

A spontaneous pneumothorax too often goes unrecognized, and its recognition is often imperative. Whenever you encounter a patient with sudden dyspnea and pain in the chest, think of it. It may closely simulate an attack of bronchial asthma, angina pectoris or that picture of acute distress called cardiac asthma. The absent (or more rarely, amphoric) breath sounds on the affected side, the hyperresonance or dull tympany of the percussion note and the displacement of the heart



toward the sound side will readily make the diagnosis. The coin sound, a metallic resonating echo produced by the tapping of two coins on the chest wall is confirmatory.

The more I engage in chest work, the more convinced I am of the value of stereoscopic films. No case has been completely studied without them. The tremendous value of serial x-ray films is coming more and more to be realized. The fluoroscopic examination has its place in revealing the living cross section of the moment. In border line cases, the presence of an inter-lobar streak or a small diaphragmatic puckering, is, I feel, significant as a probable tuberculosis stigma.

In conclusion, a few remarks from the laboratory angle. The compliment fixation test, the sedimentation test, animal inoculation and special cultural methods are complex and technical and have no place in a discussion of the practical. The important contribution of the laboratory is the examination of the sputum. A gross examination of the sputum should always be made, noting particularly the color, odor and consistency. A negative sputum of course does not mean the absence of tuberculosis. It would be ideal if all cases of tuberculosis could be diagnosed before the sputum contains tubercle bacilli. The number of bacilli in the sputum does not parallel the gravity of the disease; but a quantitative expression of this number will serve a useful purpose when done serially in an individual case. Where there are extensive pathologic changes in the lungs and the sputum copious, a negative examination for tubercle bacilli practically rules out tuberculosis. The morning specimen of sputum is desired when looking for tubercle bacilli. Letting the sputum stand on the laboratory shelf for a day or two will promote autolysis and subsequent examination of the now thin foul material may reveal numerous bacilli where before a few or none were found in the thick mucoid specimen. This does not of course replace the anti-formin concentration method. Finally, the sputum should be examined for elastic tissue, fungi and spirochetes. For their detection only simple laboratory procedures are required and their presence may have considerable clinical significance.

## DIURETICS IN THE TREATMENT OF EDEMA AND ASCITES†\*

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Diuretics are agents used to increase the urinary flow. The removal of abnormal accumulations of fluid in the body tissues or cavities with certain diuretic drugs will be discussed in this paper. The more commonly used diuretics may be divided into those that exert a mild diuretic effect, viz., urea, ammonium chloride, ammonium nitrate, glucose, caffeine, digitalis, alcohol, the xanthine group and those that possess more drastic diuretic properties, that is, the mercurial group of which salyrgan (mersalyl) and novasurol (merbaphen) are the most efficient.

The pharmacodynamics of diuretics will not be considered in detail in this paper. There are many different theories as to the manner by which these drugs increase the urinary output. The most plausible of these are (a) the chemical action of the diuretic with the body tissues and their water and sodium chloride content and (b) the theory of the direct action of these drugs on the kidney structure.

The work of Govaerts<sup>1</sup> is strong evidence in support of the theory of the direct action of these drugs on kidney structure. He has been able to transplant rapidly the kidneys of one animal into the neck of another and anastomose the blood vessels so that a very excellent kidney function is maintained. A diuretic (novasurol) was given the animal before operation. Its kidneys were then removed and transplanted into the neck of another animal that had not been given a diuretic. The transplanted kidneys in the neck showed a marked diuresis while the animal's own kidneys excreted a normal amount of urine. A reversal of the experiment by transplanting the kidneys from an animal not having had a diuretic into one that had been given a diuretic prior to operation caused the animal's own kidneys to

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show a diuresis while only a normal amount of urine was excreted by the grafted kidneys in the neck. These experiments are very suggestive of the direct effect of this drug on the kidney structure rather than any action in the body tissues.

Hermann et al<sup>2</sup> have shown that diuresis from the xanthine group and from digitalis is produced by increasing glomerular filtration (a capillary dilatation phenomenon) while the mercurials produce diuresis by retarding absorption in the tubules. Their conclusions were that diuresis is almost entirely a result of a direct action on the kidney structure. It is, however, more correct to assume that different diuretics may produce diuresis in different ways<sup>1</sup>.

Edema and ascites may be caused by cardiac failure, obstruction of the portal circulation, acute nephritis, nephrosis, rarely chronic nephritis, nutritional disorders, certain inflammatory diseases of the serous surfaces and neoplasms. Of these various causes only the ascites and edema of cardiac failure will be discussed in detail.

Peripheral edema causes an increase in resistance to the blood flow and thereby increases the burden of an already incompetent myocardium. An accumulation of fluid in the pleural or peritoneal cavities also serves in a mechanical way to embarrass heart action. Thus a vicious circle is created in heart failure. By adequate bed rest and digitalis the efficiency of the heart muscle is increased so that diuresis begins and cardiac compensation is soon established. In the more advanced states of cardiac failure the heart muscle is unable to respond to digitalis and bed rest sufficiently to cause diuresis and cardiac failure persists. It is in this group that the diuretics are of great value.

The use of the milder diuretics is often disappointing. Diuretin (theobromine sodium salicylate in 7½ to 15 grain doses, given at 8, 10, and 12 o'clock in the day and repeated after an interval of twenty-four hours is one of the most satisfactory of the mild diuretics. Theocin (theophyllin) given in the same manner is possibly more effective as a diuretic but often produces gastric irritation and nausea. Metaphyllin (euphyllin) in 1½ grain doses three times a day is the least ef-

ficient as a diuretic of the xanthine group but it is of some benefit to those with the anginal syndrome both as a diuretic and as a coronary dilator.

Miller and Feldman<sup>5</sup> have studied the effect of large doses of urea on the edema of cardiac failure. They found that urea given in doses of 10 to 25 grams three times a day in 100 to 200 cc. of fruit juice or beer produced no gastric distress and very satisfactory diuresis. No untoward effects occurred even when given continuously over a period of five years. Occasional supplementary injections of salyrgan were necessary to prevent the recurrence of edema and ascites.

The mercurials form the basis of the more drastic and efficient diuretics. Of these salyrgan and novasurol are the most frequently used. Salyrgan is an aqueous solution containing about ½-grain of metallic mercury to the cubic centimeter. Novasurol is also an aqueous solution containing about the same amount of metallic mercury. Clinical and laboratory studies<sup>4,5</sup> have shown that salyrgan is less toxic and equally as efficient as novasurol and it has almost completely replaced novasurol as a mercurial diuretic.

That mercury may be a renal irritant is a well-known fact. Salyrgan, however, has been used repeatedly over long periods of time, even in those with previously existing renal disease, without untoward effect<sup>6</sup>. Occasionally patients who have an idiosyncrasy to mercury are encountered and reactions such as convulsions and anuria may occur. Only one such instance has been recorded in the literature<sup>7</sup> and this patient made an uneventful recovery. Because of this very infrequent idiosyncrasy caution must be used in administering the initial dose of this drug. It should first be given deep into the gluteal muscles in a dose of 0.5 cc. If no reaction occurs within 48 hours it may then be given in doses of from 1 to 4 cc. every three to seven days. The efficiency of salyrgan, whether given intravenously or intramuscularly, is the same and very little local reaction is produced. It should never be given subcutaneously as it is extremely irritating to the subcutaneous tissues and sloughing may occur. A diuresis of 4 to 6 liters usually follows within twen-



ty-four hours after the injection of 1 to 2 cc. of salyrgan. Its diuretic effect may sometimes be increased by giving 30 grains (2 grams) of ammonium chloride four times daily for three or four days before salyrgan is given.

The following case report will serve to illustrate the value of salyrgan therapy in one with chronic congestive heart failure.

A nineteen year old colored girl with mitral stenosis and congestive heart failure was first seen in November, 1928. Cardiac insufficiency dated back three months. She had experienced recurring attacks of acute rheumatic fever all of her life.

She was moderately dyspneic and cyanotic. There was very little orthopnea. The peripheral veins were distended. There was moderate pitting edema of the legs. The liver was 6 cm. below the costal border and tender. The abdomen was tense with ascites. There were moist rales at the bases of both lungs but no fluid in the pleural cavities. The heart was considerably enlarged. The supracardiac dulness measured 4 cm., the right margin 6 cm., and the left margin 12.5 cm. The total diameter of the chest was 28 cm. There was a systolic vibration at the apex. The first sound at the apex and the pulmonic second sound were greatly accentuated. There was a harsh (grade 4) systolic murmur and a mid-diastolic murmur heard best at the apex. No aortic diastolic murmur was heard. The heart rate was 120 per minute, the rhythm regular and the blood pressure 115 mm. systolic and 70 mm. diastolic. There was a 2 plus albumen in the urine and a few red blood cells and casts were seen in the sediment. The phthalein excretion was 60 per cent in two hours. The blood Wassermann was negative.

The patient remained in the hospital five weeks. During this time there was an irregular elevation of temperature. She was given adequate doses of digitalis but the cardiac failure persisted until an abdominal paracentesis was done and about 5,000 c.c. of straw colored fluid removed.

During the next 14 months there were 13 admissions to the hospital for recurring cardiac failure with edema and ascites. Abdominal paracenteses were done on each admission and on some occasions between admissions. Three to five thousand c.c. of fluid were removed each time. During the second year of the patient's illness the regular administration of salyrgan in doses of 1 to 2 c.c. at intervals of 3 to 7 days was begun. Diuresis was always prompt and profuse and about 5 liters of urine were excreted during the first eighteen hours following an injection. After beginning the use of salyrgan regularly abdominal paracenteses were no longer necessary and her circulatory competence was greatly improved. Her admissions to the hospital were reduced from thirteen during the first year to two during the second year and one during the third and fourth years. The last admission was occasioned by a recurrence of the acute polyarthrititis rather than circulatory failure.

During the past three years she has been given 175 cubic centimeters of salyrgan. No abdominal paracenteses have been done during this time and her circulatory competence has been such as to allow the performance of light household duties most of the time.

A study of the patient's renal function after the prolonged administration of salyrgan shows no evidence of renal damage. There is now only a trace of albumen in the urine, no red blood cells and only an occasional cast in the sediment. The blood chemistry is within normal limits and the phthalein excretion is 50 per cent in two hours.

This case report illustrates well the prolonged use of salyrgan in frequent doses without harmful effect and its efficiency in the removal of edema and of ascites that previously required frequent abdominal paracenteses. That cardiac efficiency may be greatly increased by preventing the occurrence of edema and ascites is also well demonstrated.

Salyrgan may also be used to remove abnormal accumulations of fluid from such causes as portal cirrhosis of the liver, neoplasms, and tuberculous effusions<sup>8</sup>. It may be used with caution in those with nephrosis and in the few patients with chronic nephritis who develop edema and ascites. It is of very little value in anuric states and definitely contraindicated in acute nephritis.

#### Summary

Some of the more commonly used diuretics have been discussed. Of the milder diuretics those of the xanthine group and urea are probably the most efficient. The results obtained with the milder diuretics are often disappointing. The mercurials are the most efficient diuretics. Of these salyrgan is the least toxic and it may be used continuously over long periods without producing harmful effects.

The importance of removing ascites and edema when treating patients with chronic cardiac failure is illustrated.

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**CYSTOSCOPY**

The cystoscope has meant more to the progress of urology than any other one instrument. This instrument has been in use over a long period, but not until recent years has it been perfected to the extent that it is of paramount value to the urologist. The modern cystoscope is an improvement on the early Nitz design. The present day 'scope gives one a large field of vision, renders the operation less painful and enables by irrigating attachments the operator to have a clear field over a long period of time.

A century ago when blood was found in the urine it was more or less a question of guesswork with the physician to determine the source of the hematuria. Today with the improved methods one can tell the exact spot from whence the blood comes and is in far better position to render accurate treatment.

One of the most common conditions with which the urologist has to deal is pyuria. Upon discovery of this entity one immediately begins to look for some focus of infection. In some cases the eye, ear, nose and throat practitioner will clear the pus by removal of a diseased tonsil, treatment of a sinus infection, or some ear involvement. Some carbuncle or abscessed area may be opened and drained thereby eliminating the pus in the urine. The dentist may remove or treat some diseased tooth and render the urinalysis report negative. Invariably one finds the infection traceable to some calculi or other bladder, ureter, or kidney involvement. In order to successfully and accurately determine the source of pus one has to resort to cystoscopy in a large percentage of cases.

Oft-times a cystoscopic examination with catheterization of ureters is ample treatment for relief of a patient's symptoms. In a case where one has a slight kink in a ureter or stricture which causes poor drainage from the kidney to the bladder, passing the catheters

during the examination will help to eliminate the trouble. Small stones in ureters and bladder have often passed without any difficulty after catheterization of ureters.

A tuberculous kidney can be discovered early with the aid of the cystoscope. Very often during routine examination where the ureters are catheterized, specimens collected from the kidneys for microscopical, culture, or guinea pig test disclose a tuberculous condition. In my opinion an early discovery of a tuberculous involvement is of great value to the physician or surgeon in mapping out his treatment.

Not many years ago the treatment of vesical tumors was mainly by medicines. Of course, no good results were obtained from treatment of such nature. With the aid of the cystoscopes of recent years one is able to discern the size, shape, and position of a bladder tumor. With a clear view of the tumor through the cystoscope, one can decide on the most feasible procedure to which he should resort in order to most completely eliminate the entire growth. With improved recent methods for diagnosing, the urologist is able to effect more cures and render the patients more comfortable in conditions which are brought for treatment too late for cure. One can prolong the life of numbers of incurables.

*The JOURNAL would like to record the scientific work of Georgia doctors. It earnestly requests, therefore, that each physician in the State who publishes a contribution in some other medical periodical submit an abstract of the article for these columns.*

In men over fifty-five, diseases of the prostate gland are common. In earlier times medicine was the principal treatment for such conditions. This type of treatment was practically of no avail. Medicines were continued in a great number of these cases over a long period of time. Very often the enlarged prostate caused a damming back and stagnation of urine in the bladder, the end results of which were infections of the ureters and kidneys with possibly pyo-ureters, hydronephrosis or some other kidney, ureter, or blad-



der pathology, which greatly impaired the function of the kidneys. With the aid of the cystoscope one is able to determine the type of prostatic condition with which he is dealing, and is also able to decide intelligently what type of procedure is indicated—thus one can conclude whether it is necessary to perform a prostatectomy or resort to a newer and more recent method of resection of the prostate through the urethra.

In order to treat any disease accurately it is necessary to make the proper diagnosis. The cystoscope has meant more to the urologist along this line than any other instrument devised within the last century. If a doctor has a cystoscope touch and thoroughly understands the workings and application of his scope, eighty per cent of his urologic diagnostic worries are over.

Atlanta      SPENCER A. KIRKLAND, M.D.

### CANCER OF THE CERVIX

Cancer of the cervix continues to be one of the great killers of our women. It is a tragic and pitiful fact that there seems to be this punishment placed on mothers as a penalty for child-bearing. Whatever may be the direct cause of cancer, it is generally understood that the stretching and tearing at childbirth are the causes of cancer of the cervix. Traumatism here as elsewhere has its bearing on the development of malignancy. The woman with one child is not so likely to develop cancer of the cervix as is the woman who has borne six or eight children. We may assume that the more births the more traumatism and hence the greater likelihood of the development of cancer. It is extremely rare for a woman who has never been pregnant to have cancer of the cervix, and in those rare cases where it does occur under such circumstances there is frequently a history of some preceding trauma, such as the instrumentation incident to a curettage or the wearing of a pessary or some other traumatic agent.

The writer has seen only one case of cancer of the cervix in a woman who had not borne children and had not had any known traumatic influence on the cervix.

The predominant age in cancer of the cer-

vix is the age between forty and fifty years, the age in which these mothers are at the zenith of usefulness to their families and their communities. To be sure, cancer does occur after fifty with progressive infrequency, and with the same relative infrequency it does occur before forty. The youngest patient in the author's experience was twenty-two years old. Bearing these facts in mind it behooves us to be on the lookout for this disease in women of any age.

The symptoms of cancer of the cervix are pronounced and unmistakable. The first premonitory symptom is bleeding when it should not occur. Bleeding in a woman past the menopause means cancer unless proved otherwise. Bleeding between the periods in any woman should excite a suspicion of cancer. Pain is not associated with early cancer. Pain with cancer indicates that the patient is not developing cancer but is dying with cancer.

The diagnosis of cancer of the cervix is easy and is well within the capabilities of any medical man. It is suspected with the history of bleeding when there should be no bleeding; by the palpating finger which, when being swept around and over the cervix feels either an excavation or a fungus growth, depending on whether the cancer is of the excavative or papillomatous variety. The withdrawn finger may be covered with blood, and inspection verifies what has been felt. A section easily taken from the diseased area and submitted to any reliable pathologist confirms the diagnosis. The above applies to the developed cancer. In the earliest cases, and these are the ones that offer the greatest hope of cure, the procedure is the same but a little more difficult. The beginning cancer cannot be felt as such, but a painstaking visualization of the part will show a raw area which is either bleeding or can be made to bleed by gentle rubbing with a gauze sponge. Such a condition with a proper history constitutes a surgical emergency. A section should be taken at once, in the doctor's office, if need be, and an immediate pathologic examination made.

Treatment in early cancer of the cervix should yield good results. Unfortunately such early diagnoses are not the rule.

The writer is convinced that more cancers of the cervix can be cured by prevention than will ever be cured by any of the most highly developed surgical procedures, once the disease is established. The eroded, ulcerated, and lacerated cervix is the place on which cancer grafts itself. The cautery, repair of the laceration or, in extreme cases, amputation of the cervix, will transform the unhealthy diseased focus which is a menace, into a healthy cervix and vaginal vault. From such a healthy place cancer will not grow.

The great hope for women in the future lies in a knowledge of the above facts, which will drive them to a physician for periodic examinations. It also lies in an awakened consciousness in the minds of doctors that will force them to give especial care to this subject and make possible the prevention of cancer or the diagnosis of the disease in its earliest stages.

Augusta.

G. T. BERNARD, M.D.

#### OFFICIAL CALL

*To the Officers, Fellows and Members of the American Medical Association:*

The eighty-fifth annual session of the American Medical Association will be held in Cleveland, Ohio, from Monday, June the eleventh to Friday, June the fifteenth, Nineteen hundred and thirty-four.

The House of Delegates will convene on Monday, June the eleventh.

The Scientific Assembly of the Association will open with the General Meeting held on Tuesday, June the twelfth at 8:30 p.m.

The various sections of the Scientific Assembly will meet Wednesday, June the thirteenth, at 9 a.m. and at 2 p.m. and subsequently according to their respective programs.

DEAN LEWIS, *President*

FREDERICK C. WARNSHUIS,

*Speaker, House of Delegates*

*Attest:* Olin West, Secretary, Chicago, Illinois, March the twenty-fifth.

#### HOUSE OF DELEGATES

The House of Delegates will convene at 10:00 a.m. on Monday, June 11, 1934, in the Ball Room of the Hotel Statler, Euclid Avenue and East Twelfth Street.

#### REPRESENTATION

*The apportionment of delegates at the Philadelphia*

*Session of 1931 entitles your State Association to three delegates for 1932-33-34.*

"A member of the House of Delegates must have been a member of the American Medical Association and a Fellow of the Scientific Assembly for at least two years preceding the session of the House of Delegates at which he is to serve."

"Delegates and alternates from constituent associations shall be elected for two years. Constituent associations entitled to more than one representative shall elect them so that one-half, as near as may be, shall be elected each year. Delegates and alternates elected by the sections, or delegates appointed from the United States Army, United States Navy and United States Public Health Service shall hold office for two years."—*Chap. 1, Secs. 1 and 2, By-Laws.*

#### RULES FOR THE GUIDANCE OF THE COMMITTEE ON CREDENTIALS

*Adopted by the House of Delegates at Atlantic City, N. J., June 6, 1912*

1. Credentials shall be of two parts. The first part shall be sent to the office of the Secretary of the American Medical Association by the Secretary of the constituent association, not later than seven days prior to the first day of the first meeting of the House of Delegates, and shall be a list of delegates and alternates for that association. The constituent associations shall designate an alternate for each delegate, who may take the pledge of the delegate when authorized to do so by said delegate in writing. In the absence of such authority, any alternate who has been duly chosen by the constituent association may be seated in place of any delegate who is unable to attend, provided he presents proper official authority from said association. A certificate signed by the president or secretary of the constituent association shall be deemed legal authority (*as amended June 7, 1921*).

2. Each delegate shall be furnished with a credential by the secretary of the association by which he is elected on a prescribed form furnished by the Secretary of the American Medical Association, which shall give the date and term for which he was elected and who was elected to act as alternate for him in case of his inability.

3. A delegate, on presenting himself to the Committee on Credentials, may be seated even though he may not present part 2 of his credentials, provided he is properly identified as the delegate who was elected by his association and whose name appears on the Secretary's record.

4. No alternate may be seated unless his credentials meet the same requirements as designated for the delegate and he can show written evidence that he is empowered by his delegate to act for him, except as provided for in Section 1 as amended (*as amended June 7, 1921*).

5. When a constituent state association reports that one of its elected delegates and his elected alternate are both unable to attend a specified annual session of



the American Medical Association, the constituted authority of said constituent state association may fill the vacancies caused by the absence of both an elected delegate and his elected alternate, and such a substitute delegate or his substitute alternate who presents proper credentials signed by the president and secretary of said constituent state association shall be eligible to regular membership in the House of Delegates of the American Medical Association in such a specified session (*as adopted, May 12, 1932*).

#### SCIENTIFIC ASSEMBLY

The Opening General Meeting, which constitutes the opening exercises of the Scientific Assembly of the Association, will be held Tuesday evening, June 12, 1934, at 8:30. The Sections will meet on Wednesday, Thursday and Friday, June 13, 14 and 15.

*Convening at 9:00 a.m., the Sections on*

Surgery, General and Abdominal.

Ophthalmology.

Pediatrics.

Pharmacology and Therapeutics.

Nervous and Mental Diseases.

Dermatology and Syphilology.

Gastro-Enterology and Proctology.

Radiology.

*Convening at 2:00 p.m., the Sections on*

Practice of Medicine.

Obstetrics, Gynecology and Abdominal Surgery.

Laryngology, Otology and Rhinology.

Pathology and Physiology.

Orthopedic Surgery.

Urology.

Preventive and Industrial Medicine and Public Health.

Miscellaneous Topics.

#### REGISTRATION DEPARTMENT

The Registration Department will be open from 8:30 a.m. until 5:30 p.m. on Monday, Tuesday, Wednesday and Thursday, June 11, 12, 13 and 14, and from 8:30 a.m. to 12:00 noon on Friday, June 15, 1934.

#### VENEREAL DISEASE INFORMATION

For a number of years the U. S. Public Health Service has been publishing, for the information of physicians, health officers, and others, a monthly abstract journal known as "Venereal Disease Information." This publication contains usually one original article on a subject of general interest in connection with the venereal diseases and numerous abstracts from the current literature pertaining to these diseases. In the preparation of this abstract journal more than 350 of the leading medical journals of the world are reviewed and abstracts made of the articles on this subject.

The cost of "Venereal Disease Information" is only fifty cents per annum, payable in advance to the Superintendent of Documents, Government Printing

Office, Washington, D. C. It is desired to remind the reader that this nominal charge represents only a very small portion of the total expense of preparation, the journal being a contribution of the Public Health Service in its program with State and local health departments directed against the venereal diseases.

#### PROCEDURES FOR TREATMENT OF MYELOGENOUS LEUKEMIA

According to U. V. Portmann, Cleveland (Journal A. M. A., Jan. 20, 1934), the technical factors governing the dosage of roentgen irradiation for myelogenous leukemia are relatively effective in the region to which they are applied. Myelogenous leukemia is ultimately a generalized disease, progressively affecting certain regions of the body, and the order of the regions affected and the rate of progression vary in different persons. An abnormal white blood cell count is the result and not the cause of the disease and is significant only when physiologic processes of certain organs are not normal. In administering radiation, it is illogical to irradiate always and as a routine the whole or a single part of the body. Instead, an effort should be made to discover which vital functions are particularly affected in each patient so that treatment can be administered to the areas involved.

#### HEALTH OFFICER

Indeed, most grown-ups would answer the question of what a health officer does by replying in terms of garbage collection and sewage inspection. Really, these items are least in importance and smallest in number, of the duties. The study in Ohio showed that health officers are busy advising prosecuting attorneys, nurses, dairy and food inspectors, milk plant employees and 123 other classes of persons; that they check the records of sanitary inspectors, clinic executives, physicians, milk handlers and 24 other types of persons; that they examine people for 55 different diseases, ailments or defects, make laboratory examinations for 30 diseases, locate cases of 44 diseases, keep records of about 51, and in their spare time fill in with such things as making 14 different kinds of surveys, conducting instruction in 8 types of classes and find time to inform the public by means of speeches, radio talks and motion picture exhibitions on 27 different subjects pertaining to health.

To enumerate all the duties disclosed by this survey would be to labor the point. It must be apparent that the health officer is a busy man. Almost everywhere, throughout the depression, death rates have been going down, because the health officer is generally an able, and tireless worker, who surrounds himself with a capable staff who work at a high state of efficiency despite cuts in salaries. Generally the health officer does not advertise himself very much. The public looks upon his contribution to their welfare as we are all prone to view casually the benefits to which we are accustomed.

## GEORGIA DEPARTMENT OF PUBLIC HEALTH

T. F. ABERCROMBIE, M.D., *Director*

## ALUM PRECIPITATED TOXOID

The evolution of active immunization against diphtheria is one of the most remarkable achievements of medical science. It began in 1913 with the discovery of toxin-antitoxin by Von Bering who showed that if diphtheria toxin is neutralized with antitoxin the mixture would produce active immunity in man. The use of toxin-antitoxin was promoted in this country by Park who put it to test on a large scale among the children of New York City. Health authorities became very enthusiastic, in fact too much so, as later results revealed. We now realize that three doses of toxin-antitoxin will immunize only about 75 per cent of susceptible children. This left much to be desired.

In 1923 Ramon of France showed that the toxic fraction in a solution of diphtheria toxin could be destroyed by adding about 4 per cent formaldehyde to the latter and incubating for several weeks. This detoxified toxin was found to be much more effective as an immunizing agent than toxin-antitoxin. Ramon found that one injection of this product which he named anatoxin was as effective as three injections of toxin-antitoxin and that two injections would produce immunity to the point of a negative Schick test in over 90 per cent of Schick positive children.

Anatoxin, or toxoid as it is called in this country, was found to possess several other advantages over toxin-antitoxin. It contains no horse serum and hence does not increase man's sensitivity to other biologics made of horse serum. Immunity production with toxoid is more rapid and reactions in small children are very mild. In older children and adults, however, rather severe reactions are occasionally produced, an objection which does not apply to toxin-antitoxin.

Toxoid soon supplanted toxin-antitoxin, except for older children, and at the present time is being used on a large scale. Very rarely indeed is diphtheria reported as occurring in children who have previously received two injections.

But this is not the end of the story. In 1926 Glenny, Pope and others found that if toxoid is treated with 0.2 solution of potash alum a precipitate is formed which contains the immunizing or antigenic agent in a very much more concentrated form as de-

termined biologically. However, no application was made by these investigators to immunization of humans. In 1932 Havens and Wells of the Alabama State Board of Health found that by adding as much as 4 per cent of potash alum an almost complete precipitation of toxoid could be obtained. The precipitate is washed with physiological salt solution several times. This gets rid of about 70 per cent of the extraneous proteins. The washed precipitate is then suspended in NaCl. The antigenic power of the alum precipitated toxoid thus prepared is very high. Injections of as small an amount as 0.1 c.c. into guinea pigs will in four weeks cause the production of sufficient antitoxin to protect them against five times the amount of toxin required to kill an unprotected pig. Injections of 0.5 c.c. will protect pigs against even as much as 100 killing doses of toxin. Experimental application was then made to human immunization. In 1933, Graham, Murphee and Gill of the Alabama Health Department reported that 92.4 per cent of 185 Schick positive children were rendered Schick negative by a single injection of 1 c.c. of the new alum precipitated toxoid. In 1933, McGinnes and Stebbins of the State Department of Health of Virginia reported that 95 per cent of 579 Schick positive children were Schick negative after a single injection. One of the first questions to arise was in regard to the size of dose best suited to give optimum results with a minimum of reaction and discomfort. Of the group of 579 reported by McGinnes and Stebbins, 324 received 0.5 c.c. each and 255 received 1.0 c.c. each. The same amount of toxoid was present in both the 0.5 c.c. and the 1 c.c. doses, the only difference being in the amount of saline used for suspension. Of the group of 324 receiving 0.5 c.c. each, 93.8 per cent were rendered Schick negative. Of the group of 255 who received 1.0 c.c. each, 96.1 per cent became Schick negative. Apparently, therefore, the 1.0 c.c. dose is more efficient than the same amount of toxoid contained in 0.5 c.c. dose.

In 1933 through the courtesy of the Alabama Laboratories a quantity of alum precipitated toxoid was obtained by the writer for trial in Georgia among certain health clinics. Dr. T. B. Gay reports that one group of 274 Schick positive children at the City Board of Health Clinic of Atlanta was rendered Schick negative to the extent of



92.3 per cent. Of this number 86 received 1 c.c. doses of the Alabama product, with the result that 82, or 95.6 per cent became Schick negative in from six to twelve weeks. Another group of 159 received 0.5 c.c. each of the Alabama product. Of this number, 140, or 89.4 per cent, became Schick negative. It should be remembered, however, that the latter group received only half the actual quantity of toxoid as the former.

As to reactions, Gay observed only two cases showing a general reaction with fever. The remaining 295 showed only slight local reactions which on subsiding left a small lump of induration which often persisted for two or three weeks. This induration is due to the fact that alum precipitated toxoid when injected is very slowly absorbed. To its slow absorption is attributed in large part its high immunizing power. Very rarely the indurated area resolves itself into a "cold" or sterile abscess which may have to be incised and drained.

Reactions in older children encountered with plain toxoid do not seem to occur with alum precipitated toxoid. This is probably due partly to the removal of much of the extraneous proteins by the precipitation process and partly to the very slow absorption of what protein remains with the precipitate. Gay reported that 52 children in his clinic ranging in age from eight to fifteen years showed no more marked reactions than did the younger groups. Its use has also been reported in adults without untoward reactions.

The advantages of alum precipitated toxoid are:

1. It requires only one injection.
2. It confers a higher degree of immunity.
3. Immunity production is more rapid than that produced either by toxin-antitoxin or plain toxoid.
4. It can be given to older children without untoward reaction.

While at present the cost of the alum precipitated toxoid is higher than plain toxoid, the fact that only one injection is needed more than compensates the higher cost.

#### NEWS ITEMS

Dr. Eugene R. Corson, Savannah, was honored for his research work and as one of the profession's most outstanding members by the Georgia Medical Society at a banquet given at Hotel DeSoto on April 30. His medical career has been one of distinction and he is the oldest physician in years of practice in the society. Dr. Corson has practiced medicine for more than a half century.

The staff meeting of the Wesley Memorial Hospital, Emory University, was held on April 13th. Dr. C. W. Strickler, Atlanta, gave case reports, *Two Unusual Pneumonia Cases* and *One of Heart Disease*; Dr. R. A. Bartholomew, Atlanta, case reports, *Toxemia of Pregnancy* and *Hypertensive Heart Disease*; Dr. H. G. Ansley, Decatur, *Gunshot Wound of Chest*; Dr. H. C. Sauls and Dr. Carter Simth, Atlanta, *Septicemia* and *Bacterial Endocarditis*.

The staff meeting of the Piedmont Hospital, Atlanta, was held on April 9. Dr. Jas. E. Paullin, Atlanta, reported a case, *Aleukemic Leukemia*. Dr. Lawson Thornton, Dr. Edgar F. Fincher and Dr. Montague L. Boyd, Atlanta, discussed the *Management of Spinal Injuries*.

The Georgia Medical Society met on April 24. Dr. A. J. Waring, Savannah, read a paper entitled, *Nephroses of Childhood*; Dr. H. J. Morrison, Savannah, led the discussion. Dr. M. J. Epting, Savannah, gave a case report, *Papilloma of the Jejunum with Intussusception*. Refreshments were served.

Dr. L. W. Hodges, Gainesville, and Dr. W. C. Kennedy, Talmo, entertained the members of the Hall County Medical Society at Ray's Tourist Camp on Peachtree Road on April 4.

The staff meeting of St. Joseph's Infirmary, Atlanta, was held in the dining room on April 24. Dinner was served.

The semi-monthly meeting of the Fulton County Medical Society was held at the Academy of Medicine, Atlanta, April 19. Dr. Gordon G. Allison, Atlanta, gave a case report, *Sexual Impotence*; Dr. Dan Y. Sage, Atlanta, gave a clinical talk, *Salpingitis*; Dr. T. F. Sellers, Atlanta, read a paper entitled, *Laboratory Diagnosis of Typhoid and Certain other Fevers*. The discussion was led by Dr. Geo. F. Klugh, Dr. Francis Parker and Dr. T. L. Byrd, all of Atlanta.

The staff meeting of the Crawford W. Long Memorial Hospital, Atlanta, was held on April 12. The clinical program consisted of *Thoracic Aneurysm with Hematemesis and Melena*, by Dr. R. T. Dorsey, Atlanta; *Unusual Rectal Abscess*, by Dr. L. C. Fischer, Atlanta.

Dr. L. C. Allen, Hoschton, spoke before a meeting of the Jackson-Barrow Counties Medical Society at Commerce on proposed legislation which would be of vital interest to the medical profession and the general public.

Dr. and Mrs. A. J. Mooney, Statesboro, entertained the members of the Bulloch-Candler-Evans Counties Medical Society and the Auxiliary at their home on North Main Street. A three course dinner was served.

Dr. Rudolph Bell, after taking post-graduate work at the New York City Hospital, announces the opening of his office at 217 Upchurch Building, Thomasville. Practice limited to surgery and medical urology.

The Randolph County Medical Society met at Patterson's Hospital, Cuthbert on May 3. The program consisted of case reports by its members.

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, on May 3rd. Dr. Lon Grove and Dr. Joseph C. Read gave case reports entitled, *Pneumotic Perforation of the Intestines and Resection for Carcinoma of Descending Colon*. Dr. Fred G. Hodgson, made a clinical talk on, *Compression Fracture of the Spine*. Dr. R. A. Bartholomew and Dr. E. D. Colvin read a paper, *The Advantages of Paraldehyde as a Basic Amnesic Agent in Obstetrics—Report of Results in 100 Cases*. The discussions were led by Dr. C. B. Upshaw, Dr. Dan Y. Sage and Dr. Amey Chappell.

Dr. Wm. R. Houston, Augusta, spoke before the Psychology Clinic at the University of Georgia, Athens, April 27th, on the duty of physicians and the public in the care of mental and nervous diseases.

Dr. J. E. Penland and Dr. W. D. Mixson, Waycross, entertained the members of the Ware County Medical Society at dinner at the Elk's Club on May 2. Dr. C. A. Witmer, Waycross, spoke on *Osteomyelitis*.

Dr. Edgar G. Ballenger, Atlanta, has returned from Los Angeles where he was a guest speaker at the recent meeting of the Western Urological Association.

The Troup County Medical Society met at Hogansville on May 3rd. Dr. R. M. Avery, LaGrange, read a paper entitled, *Symptoms of Minor Defects in Vision*; Dr. Enoch Callaway, LaGrange, *Acute Abdomen*.

The staff meeting of Wesley Memorial Hospital, Emory University, was held on May 18th.

The Whitfield County Medical Society met at the office of Dr. H. J. Ault, Dalton, on May 10.

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, on May 17th. Dr. W. C. Dabney gave a case report, *Chronic Splenomyelogenous Leukemia under Personal Observation for 14 Years*. Dr. Edgar F. Fincher, Jr., case report, *Conservative Surgery in Cerebelli*. Dr. W. H. Kiser, Jr., clinical talk, *Mental Hygiene in Children*. Dr. Kenneth R. Bell, read a paper, *Cholecystography: Advantages of Intravenous Administration of Dye*. Discussions were led by Dr. Jas. E. Paullin, Dr. Wm. F. Lake and Dr. Frank K. Boland, Jr.

The Muscogee County Medical Society met at the Exhibit Hall, Fair Grounds, Columbus, on May 17th. Dr. J. Lee Kirby-Smith, Jacksonville, Fla., spoke on *Ringworm Disease*. The members enjoyed a stag barbecue.

The Georgia Urological Association met at Augusta on May 10th. Dr. W. B. Emery, Atlanta, was elected president; Dr. J. Righton Robertson, Augusta, president-elect; Dr. Major F. Fowler, Atlanta, Secretary-treasurer. The Executive Committee: Dr. Montague L. Boyd, Dr. W. L. Champion and Dr. Earl Floyd, all of Atlanta.

#### HONOR ROLL FOR 1934

1. Randolph County, Dr. G. Y. Moore\*, Cuthbert, December 12, 1933.
2. Macon County, Dr. Thomas M. Adams, Montezuma, January 13, 1934.
3. Henry County, Dr. H. C. Ellis, McDonough, January 18, 1934.
4. Hancock County, Dr. H. L. Earl, Sparta, February 17, 1934.
5. Wayne County, Dr. A. J. Gordon, Jesup, March 12, 1934.
6. Monroe County, Dr. G. H. Alexander, Forsyth, March 19, 1934.
7. Ware County, Dr. Kenneth McCullough, Waycross, March 19, 1934.
8. Turner County, Dr. J. H. Baxter, Ashburn, March 24, 1934.
9. Lamar County, Dr. J. M. Rogers, Barnesville, April 2, 1934.

#### COUNTIES REPORTING FOR 1934

##### *Baldwin County Medical Society*

The Baldwin County Medical Society announces the following officers for 1934:

President—O. C. Woods, Milledgeville.  
Vice-President—Lucius Bailey, Hardwick.  
Secretary-Treasurer—R. E. Evans, Milledgeville.  
Delegate—Richard Binion, Milledgeville.  
Alternate Delegate—Jno. D. Wiley, Milledgeville.

##### *Ben Hill County Medical Society*

The Ben Hill County Medical Society announces the following officers for 1934:

President—Charles Wilcox, Fitzgerald.  
Vice-President—E. J. Dorminy, Fitzgerald.  
Secretary-Treasurer—L. S. Osborne, Fitzgerald.  
Delegate—Lewis Abram, Fitzgerald.  
Censors—G. W. Willis, S. L. McElroy and T. E. Bradley.

##### *Dougherty County Medical Society*

Dougherty County Medical Society announces the following officers for 1934:

President—J. A. Redfearn, Albany.  
Vice-President—J. P. Tye, Albany.  
Secretary-Treasurer—H. M. McKemie, Albany.  
Delegate—H. M. McKemie, Albany.  
Alternate Delegate—J. P. Tye, Albany.



## CONSOLIDATE!

We realize the personal and individual difficulties that are confronting our doctors. We believe that the incomes of the individual practicing physician of Kentucky are less now than they have been at any time in this century. The whole situation is filled with danger for the future of the profession that we love. We are the only group in the United States that has not failed it, to a greater or less degree, in this emergency. It is only by combined and intelligent efforts that we are going to preserve the professional control by physicians themselves in the future. From every side special interests are sniping at the doctor. Every one seems to be carping at and chiseling on him. We have but one defender before the great court of public opinion where we must win or lose our case. There was never a time when it was so important for every physician to be a member of his county and state society and the American Medical Association. *The Journal* of the American Medical Association is the greatest scientific periodical in the world. The information contained in its pages means the difference between penury and sufficiency to hundreds of physicians. The number of members of the American Medical Association in Kentucky should be trebled within the next thirty days.

We do not always agree with the leadership of our national organization, but we cannot even intelligently disagree with them unless we know what they are saying and doing. We are one of the component associations that make the American Medical Association. Our membership needs to know its policies and to help to make them. It is a great democratic organization and is entirely under the control of the physicians of the United States. Any uncorrected faults which it develops are our faults. Those in control of its policies are sincerely interested in the welfare of the physicians of this country. They are doing their best even as we are doing ours. Medicine, however, is too individualistic in these highly organized times to survive as an entity unless we, too, are thoroughly and efficiently organized.

Let's join the American Medical Association as Fellows and help it to more completely represent the medical profession of these United States.—*From an Editorial in The Kentucky Medical Journal*. Bulletin of the A. M. A.

Daniel J. Kindel, Cincinnati, and Maurice J. Costello, New York (*Journal A. M. A.*, April 21, 1934), treated forty-two patients with pustular dermatoses including twenty-eight cases of acne vulgaris, eight of sycosis vulgaris and six of furunculosis with staphylococcus toxoid. No patient received less than 2 cc. total dosage, the maximum being 15.5 cc.; the average was 6.5 cc. per case. Of the forty-two cases, eight were slightly improved and thirty-four were unimproved or worse at the end of treatment. Furuncles developed in two cases after large doses of toxoid had been administered. The authors believe that the results do not warrant a continuation of this method.

## AMERICAN MEDICAL GOLFERS MEET JUNE 11th, CLEVELAND

The twentieth annual tournament of the American Medical Golfing Association will be held at the Mayfield Country Club, Cleveland, Monday, June 11. Thirty-six holes and eighteen hole matches will be played for the fifty prizes offered in eight events. This includes the championship event, which has as its major prize the famous Will Walter Trophy, awarded since 1923 for low gross thirty-six holes. This trophy, designed by Edgar Millar and executed by the Cellini Shop, Evanston, Ill., symbolizes the evolution of medicine.

*Trophy Depicts History of Medicine*

The first handle depicts the age of primitive ignorance, with shaman witch doctor, spells and the invocation of nature gods to cure ailing mankind, from antiquity to 500 B. C. The second handle shows the age of Greek thinkers, bearing the serpents symbolic of Aesculapius, god of medicine—an age of thought and research, from 500 B. C. to 640 A. D. The third handle represents the age of medieval superstition from 640 A. D. to 1500 A. D., with an astrologer, the physician common to the dark ages. The fire of incantation rises behind the figure as he traces a cabalistic sign in the air. The fourth handle depicts the age of modern medical research, from the Renaissance to modern time, with increasing light spreading from a figure symbolic of an enlarging vision.

Winners since the cup was placed in competition have been Drs. E. A. Seaforth, San Francisco, 1923; George McKee, Pittsburgh, 1924; Homer Nicoll, Chicago, 1925; S. M. Hill, Dallas, Texas, 1926; George McKee in 1927; Walter Shelden, Rochester, Minn., 1928; John Loudon, Yakima Wash., 1929 and 1930; George McKee, 1931; S. M. Hill, 1932, and Mark Bach, Milwaukee, 1933.

*Other Events—Fifty Prizes*

Other Events and Trophies include the Association Handicap, 36 holes net, with The Detroit Trophy; the Choice Score Championship, 36 holes gross, with the St. Louis Trophy; the 18 hole Gross Championship, with The Golden State Trophy; the 18 Hole Handicap Championship, with The Ben Thomas Trophy; the Maturity Event, with The Minneapolis Trophy; the "Oldguard" Championship, with The Wendell Phillips Trophy; the Kickers Handicap, with The Wisconsin Trophy.

*A.M.G.A. has 1100 Members*

Dr. Homer Nicoll is president; Drs. Charles Lukens, Toledo, and John W. Powers, Milwaukee, are vice-presidents of the American Medical Golfing Association, which has a total membership of approximately 1100 representing every state in the Union. All male Fellows of the American Medical Association are eligible to membership. A cordial invitation is extended to every medical golfer to write the executive secretary, Bill Burns, 4421 Woodward Avenue, Detroit, for an application blank. An enjoyable day on June 11 will be the result.

## ANNOUNCEMENT

The Gynecean Hospital Institute of Gynecologic Research of the University of Pennsylvania, is conducting an intensive study of families into which congenitally malformed individuals have been born.

Special interest centers in families in which malformations have appeared in two or more children. Physicians who have knowledge of any such families are urged to communicate with:

DR. DOUGLAS P. MURPHY,  
*Gynecean Hospital Institute,  
University of Pennsylvania,  
Philadelphia, Pa.*

AMERICAN MEDICAL ASSOCIATION  
CLEVELAND SESSION

For the accommodation of those attending the American Medical Association meeting at Cleveland, Ohio, June 11-15, the Southern Railway has arranged special sleeping cars from Atlanta through to Cleveland, leaving Atlanta on their trains, The Ponce de Leon at 6:00 p.m. Saturday, June 9, and the Royal Palm leaving Atlanta at 7:05 a.m., June 10. Also, these trains daily carry through sleeping cars between Atlanta and Cleveland. In addition to this through service from Atlanta, these trains, starting at Jacksonville, Fla., pass through principal points in South Georgia, such as Valdosta, Tifton, Cordele, Jesup, Macon, etc., affording through daily service from those points to Cleveland in each direction. The route of these trains leaving Atlanta is via Rome, Dalton and Chattanooga, through the foothills of the Blue Ridge Mountains of Tennessee and the heart of the Blue grass region of Kentucky, a most interesting and scenic trip, and all trains arrive and depart at the new magnificent Union Passenger Station at Cincinnati.

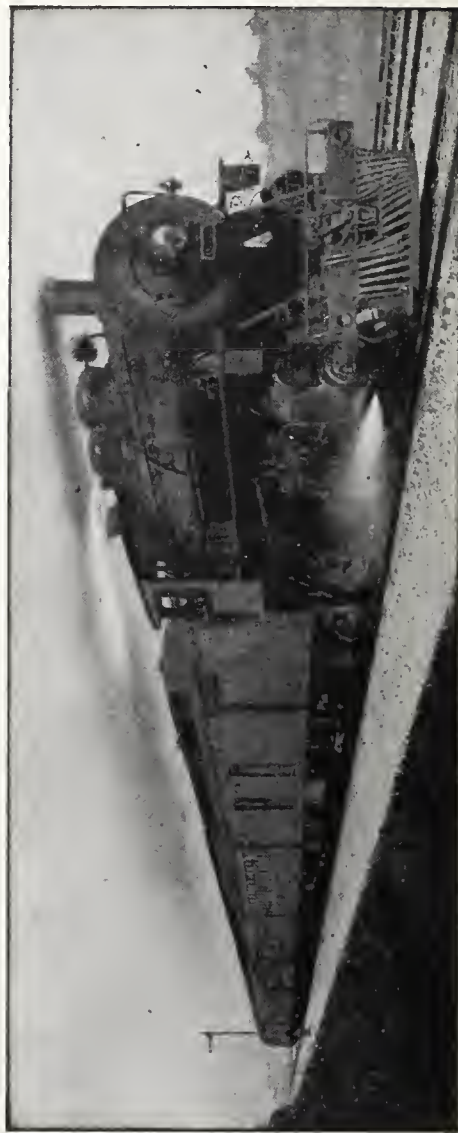
Reduced round trip fares have been authorized from all points.

Reservations may be arranged by communicating with Mr. E. E. Barry, Asst. Gen. Passenger Agent, Southern Railway, 57 Luckie St., N.W., Atlanta, Telephone WALnut 1961, who will also be glad to furnish any detailed information upon request.

L. & N. TO OPERATE SLEEPERS FOR  
DOCTORS ATTENDING AMERICAN  
MEDICAL ASSOCIATION IN  
CLEVELAND

The Louisville & Nashville Railroad is arranging to operate special sleeping cars from Atlanta to Cleveland for the accommodation of members attending the American Medical Association, which will be held in Cleveland, Ohio, June 11-15.

These special Pullmans will be handled from Atlanta in the L. & N.'s crack train "The Flamingo," leaving Atlanta from the Union Station at 6:25 p.m., June 9 and 10.



Those desiring a morning departure from Atlanta and morning arrival in Cleveland will find the service of "The Southland" leaving Atlanta at 7:40 a.m. unsurpassed. While no through sleeper is operated on this train, Pullman accommodations can be arranged with a car to car transfer in the Cincinnati Union Station.

The route of the L. & N. takes you through the mining section of North Georgia, along the foothills of the Appalachian range, thence over the beautiful Cumberland Mountains of East Tennessee and Kentucky, into the heart of the Kentucky blue grass region and over the Ohio River into Cincinnati's new Union Station. From Cincinnati one passes through the cities of Dayton, Springfield and Columbus en route to Cleveland.

Special convention fare will be granted on basis of fare and one-third for the round-trip, with suitable selling dates and return limit.

Those desiring a more extensive trip through the East may take advantage of variable route tour tickets which the L. & N. will have on sale at this time to New York and Boston, which will permit one to make the trip one-way by rail to New York, with stop-over in Cleveland for the Convention, and re-



turn from New York via steamer through Charleston or Savannah, thence rail to Atlanta.

For information concerning fares, variable route tours, schedules, etc., and for reservation in the special sleepers, communicate with F. T. Alexander, division passenger agent. Louisville & Nashville Railroad, Room 907-101 Marietta Street, Atlanta, Ga.



#### DEVELOPMENT OF TETANUS ANTITOXIN FOLLOWING ADMINISTRATION OF TETANUS TOXOID

P. A. T. Sneath, Toronto, Ont. (Journal A.M.A., April 21, 1934), states that of twenty-nine persons given three doses of tetanus toxoid, significant amounts of antitoxin developed in twenty-eight, a titer of at least 0.1 unit per cubic centimeter of serum being reached in the majority, or twenty. From five to seven months after the last dose there was, in general, a reduction in the antitoxin level, but twenty-seven still showed demonstrable antitoxin, the majority, twenty-five, showing 0.01 unit or more. This is further evidence that active immunization with tetanus toxoid might be adopted advantageously by certain groups in whom the hazard of tetanus is greater than in the general population.

#### BORDEN'S EVAPORATED MILK

"Extensive work done on the food value and digestibility of milk has shown that pasteurized milk, unsweetened evaporated milk, and dried whole milk may be used one for the other."

This interesting and significant quotation is taken from an article entitled "The Doctor and the Family Budget" by Anderson and Gillett in the Medical and Professional Woman's Journal for March, 1934 (page 78). The authors point out that standard evaporated milk can be obtained at low cost, the savings on this high quality product often being the means of supplying the family with other necessary protective foods.

"Many mothers," they continue, "will not believe that unsweetened evaporated milk is beneficial for their children until the physician recommends it."

Physicians know that the advantages of evaporated

milk have been amply demonstrated by clinical research and experience. In recommending an evaporated milk, however, it is desirable to specify an outstanding brand, such as Borden's, in order that patients will be assured of the product that will give the utmost satisfaction to them as well as to the physician.

Borden's was the first evaporated milk to be submitted to the Committee on Foods of the American Medical Association and the first to receive its seal of acceptance. Since 1930 Borden's has enjoyed the well-merited privilege of displaying this important seal.

#### PABLUM—MEAD'S PRE-COOKED CEREAL

Mead Johnson & Co. are now marketing Mead's Cereal in dried pre-cooked form, ready to serve, under the name of Pablum. This product combines all of the outstanding mineral and vitamin advantages of Mead's Cereal with great ease of preparation.

All the mother has to do to prepare Pablum is to measure the prescribed amount directly into the baby's cereal bowl and add previously boiled milk, water, or milk-and-water, stirring with a fork. It may be served hot or cold and for older children and adults cream, salt and sugar may be added as desired.

Mothers will cooperate with physicians better in the feeding of their babies because Pablum is so easy to prepare. It gives them the extra hour's rest in the morning and saves bending their backs over a hot kitchen stove in summer. Please send for samples to Mead Johnson & Sompany, Evansville, Indiana.

#### SQUIBB HALIBUT-LIVER OIL CONCENTRATE TABLETS WITH VIOSTEROL 250-D

A new product that has just been released by the Squibb Laboratories is Squibb Halibut-Liver Oil Concentrate Tablets with Viosterol 250-D. These highly potent, chocolate-coated tablets will be prescribed by physicians as an alternative means of administering the vitamins of Viosterol-fortified Halibut-Liver Oil.

Each tablet equals in Vitamin A and D potency, 10 drops (approximately 10 mins.), of Squibb's Stabilized Halibut-Liver Oil with Viosterol 250-D. The vitamin-potency of the tablets is protected by the same methods that have been found to be so successful in affording similar protection in the manufacture of Adex Tablets.

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#### Portable Electrocardiograph

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### LABORATORY TECHNICIAN OR DOCTOR'S ASSISTANT

Nine years' experience in general laboratory work and in meeting the general public. Wants position.

"X" Care of Journal.

### LABORATORY TECHNICIAN WANTS POSITION

Excellent experience and training at Emory University and State Board of Health. Best of references.

"I" Care of Journal.

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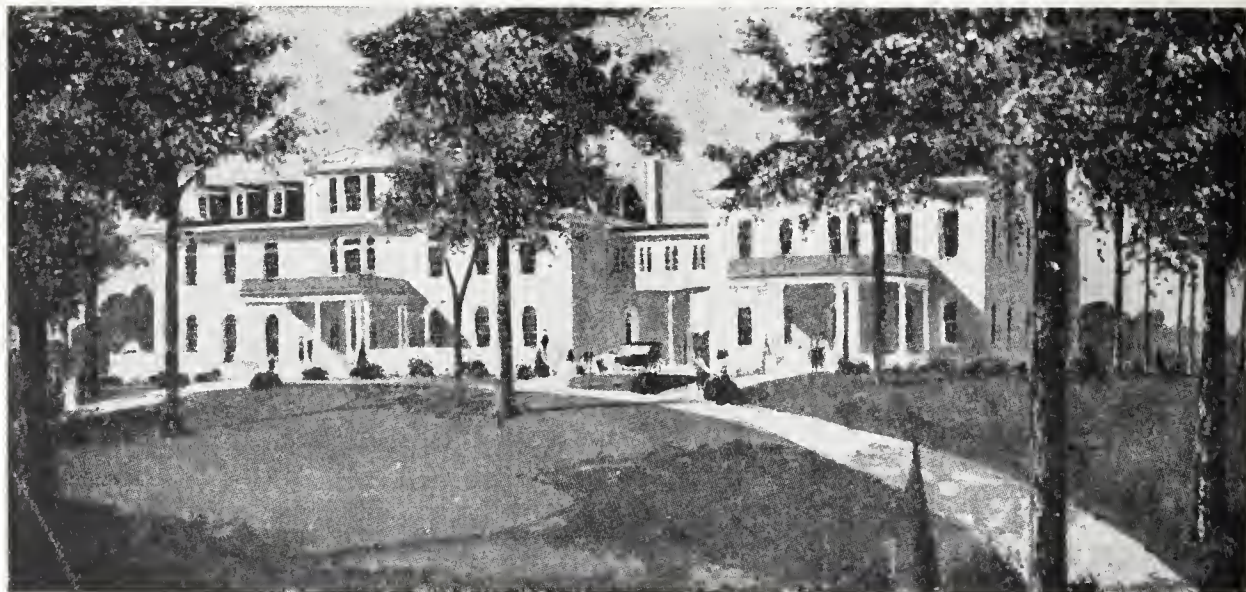
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ers. Early entrance advisable. For Care and Protection of the BETTER CLASS UNFORTUNATE YOUNG WOMEN.

Adoption of babies when arranged for. Rates reasonable. Located on the Interurban and Penna. R. R. Twenty miles southwest of Philadelphia. Write for booklet.

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## THE PROBLEMS OF PRESENT DAY MEDICINE\*

CHAS. H. RICHARDSON, M.D.

*Macon*

In the rapidly changing order which confronts modern society new problems have presented themselves in all avenues of effort, and the professor of medicine is finding some difficulty in charting its course along established channels with its tried instruments of navigation.

The year which is now closing has been one in which our profession, along with the rest of the world, is undergoing a revolution. Emergencies have been thrust upon us in such rapid succession that we can scarcely realize the gravity of the situation in which we find our profession today. As the new year begins for us it may be well for the physicians of this state to sit in council today and ponder over present economic changes.

In a relatively short space of time the specter of insecurity has come closer, and assumed concrete form to the average doctor of medicine, and it may be decidedly advantageous for us to take stock of the talents which have been committed to our trust, and frankly ask ourselves whether our established course has been the correct one, and what the future holds of assurance for better things for ourselves and for those who come after us.

The average medical man is striving for, and is concerned with the same goals that men in all other walks are concerned; the ability to earn a living in his chosen vocation, some of the comforts of mid-channel and security for his family and himself in his declining years.

We must remember that the role of the doctor is a dual one. Custom decrees that he keep his economic interest in the background, and ever keep in the forefront his interest in scientific medicine. But the realities of recent experience have shown him the necessity of interest in his economic welfare, and his growing interest in the subject would indicate that custom is being forced to wage a losing battle.

In common with all other professions and trades, medicine was involved in the economic collapse of recent years and we have come to realize that we are in a twilight zone, between an era that has passed, and a new era whose dawn is still invisible. It is recognized that out of all this would come changes, and that a new state of affairs would result, and that, in whatever new scheme presented, the medical profession would be compelled to re-adjust itself. What those adjustments will consist of, what the relationship of physician and patient will be, what role, if any, the government will assume in relation to health and the profession of medicine is purely speculative, but it behooves us to give serious thought to the whole matter, and decide, whether we shall assume leadership and solve our own problems, or sit idly by and permit others to plan for us, ere we have awakened to full realization of the danger involved.

It is axiomatic that the solution of a problem must be preceded by a clear understanding of the nature of the problem. First let us look at the great mass of human beings who stand in need of medical service. It is customary to think of human beings, as those whose physical welfare depend on food, shelter, fuel and clothing. These are basic needs, and the ability and opportunity of the person to secure these items through his own efforts are the determining factors of his economic

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\*Presidential address delivered before the Medical Association of Georgia, Augusta, May 10, 1934.

status. The position of medical care in the scheme of living is anomalous. Even though it occurs as a basic need, its cost must be met after the other basic needs have been provided. It is for this reason that any fundamental consideration of the problems of medical care must begin with an analysis of the economic status of the potential recipients of this service.

In this country of ours there live 120,000,000 people, and it is estimated that approximately 50 per cent of the total income is received by 10 per cent of the population. Another 10 per cent of the population for the past few years have had no income at all, and have had to be supported by public and private funds. It is estimated that 80,000,000 persons in the United States either do not receive the medical care which they need, or are heavily burdened by its costs. Even more extensive is the failure of the people to benefit by preventive medicine. In any one year fewer than 7 per cent of the population have a complete or even a partial physical examination.

Let's bring the problem to our own doors. The State of Georgia has a population of approximately 3,000,000 persons. 70 per cent of this population is rural, and 30 per cent urban. The average urban white family income is less than \$1,500.00, and the average income of the rural white family is less than \$1,000. In many instances in the past few years the gross family income has been less than living costs, and wherever income is found in excess of living costs, it is evident that medical care must compete with insurance, taxes, automobiles, and education, and it is always found to be the weakest, least considered competitor.

This briefly is the perspective which confronts the medical man in this state who looks to his chosen profession as an avenue to attain his promised land of subsistence, comfort and security. It is perfectly evident that the problem of providing adequate medical care, at a price they can afford to pay, to that great mass of our people with low incomes, who through inadequate income or lack of provision for the emergencies of illness, are unable to pay their doctor's bill, is a problem of major importance.

Now let us glance at the other side of the problem, the doctor himself and the dilemma in which he finds himself. He is practicing in a highly competitive market and he must view with dismay the encroachment of governmental, corporate, hospital and contract practice upon the private practice of medicine. He must cheerfully assume the entire burden of the care of the indigent sick of the community, and if he should become so bold as to inquire if this should not become the obligation of society as a whole, rather than the individual medical man, he is looked upon as one who is faithless to his holy orders. In many instances he decides to give up the unequal struggle, turns his face to the sunset, and allows himself to be drawn into some governmental full-time job at much lower income, but which he hopes will bring security.

The natural inclination is to attribute these changing conditions to the economic depression, but the root of this evil is of deeper origin. For years an unsatisfactory relationship has existed between the supply and demand for doctors, as well as members of other professions. It is perfectly evident that doctors have been trained without any thought of the real needs of the country. Overcrowding like overproduction already existed when the country was consuming the maximum of professional services. For a number of years the number of medical graduates has greatly exceeded the deaths in the profession. The last report of the Commission on Medical Education shows that the United States has more physicians per unit of population than any other country in the world and twice as many as the leading countries of Europe. There is at present one licensed physician in the United States for every 780 persons. England has one doctor per 1,490 persons; France one per 1,690, and Sweden one per 2,890. It is estimated that perfectly satisfactory medical care can be provided in this country on the basis of one physician to about 1,200 persons, and there is at present a surplus in this country of 35,000 physicians. In spite of this evident oversupply at the present time, last year 12,280 young men and women applied for admission to medical schools in this country, of whom



6,335 were accepted. When Duke University Medical School opened its doors there were 3,000 applications for admission to a freshman class that could only accept 50.

It is readily seen that a great responsibility rests on the medical schools of controlling the supply of physicians of the future. Since the cost of educating a doctor is so great, it is well to consider whether the community can afford to train such a large lot of physicians that it does not need. The cost, both in time and money, to the individual, in securing a medical education is so great, that it is a question whether in justice to himself, he should be allowed to take a medical course and then thrown into the discard. To say the least the oversupply of physicians in this country has become a distinct social, economic menace that requires the most earnest consideration on the part of organized medicine.

This then is the problem as I see it. On the one hand is a large percentage of our population in need of much more and better medical service than it is getting, but now unable to purchase more than a limited supply of it, and on account of economic disaster and improvidence, burdened by the cost of what they, of necessity, must seek. On the other a medical profession that is facing a declining market with an oversupply of physicians, and a large amount of idle time on its hands.

Now it is perfectly obvious that it is easier to discover and set up a problem than it is to find its solution. But we must accept the challenge and the responsibility, with the realization that the good of society requires the answer, and the application of sound remedial policies.

Possibly before we attempt the solution at all it may be well to review the principles of the profession of medicine as so ably outlined by one of the leaders of the guild, Dr. William Allen Pusey, and see if their application does not aid us in our quest.

"Its policies must always be governed by the major principle that medicine is the trustee of society in the care of the sick and injured, and the good of society must be the sole aim of these policies, and the welfare of the patient the first consideration in the relation between physicians and patients.

It is medicine's practical responsibility to see that as far as lies within its power, its services are available to all men.

Medicine's chief concern about its own affairs should be for the individual physician, because the competency of the profession as a whole depends on the competency of the individuals who compose it, and the public interest demands the most competent medical profession possible. Experience has shown that the vast majority of diseased conditions afflicting man can be most satisfactorily and economically cared for by a competent general practitioner. The individual physician, caring for the individual patient or family, has been shown to be the most effective and satisfactory service.

The medical profession asks for its practitioners freedom of opportunity to develop to the limit of their individual capacities, and its great endeavor should be to maintain conditions of opportunity and fair competition, and it should offer the appeal of an independent career free from any sort of dependence.

Medicine has a right to control its own affairs. Its history and altruism justify this claim. It has the right to maintain a position of authority in those affairs for which society holds it responsible.

Organization is necessary for the good of the medical profession in order that it may use its united strength in meeting its responsibilities. Organized medicine has met these conditions as far as humanly possible, and will continue to do so, and it will undertake to be heard in all matters in which it is properly concerned, and will not surrender its leadership. It will strive to preserve its organization, and see to it that it remains worthy of respect, and therefore, powerful.

Medicine must be capable of change in its policies, but must realize that change is not always advancement, and must see that the changes are in accord with sound permanent policies, and not simply concessions to short-sighted policy.

Medicine must insist that in order to provide wholesome conditions of competition between physicians, there shall be freedom of

choice of physicians by patients, and should encourage individual practice.

Now let's go back and attack our problem, and see if the application of these principles will aid in its solution. We shall attack it both defensively and offensively.

As the defensive application applies to ourselves, we shall begin with ourselves, and attempt to set our own house in order before we attempt to carry the fight to the enemy.

Remembering one of our first principles, that medicine's chief concern must be for the individual practitioner, we must realize that the whole success of our defensive scheme rests upon the competency of the average doctor, and we must see to it that he is capable of providing adequate medical care for all persons. We must be frank and realize that we have a large percentage of physicians whose medical knowledge and ability have not remained abreast of scientific progress. We must find some way of instilling into the mind and heart of the average man a greater desire for knowledge and graduate study, in order that our physicians may be brought up to present day knowledge and be made proficient. To that end I believe that we should have a definite annual program of post graduate study, controlled and outlined by the state association, and supplemented by extension courses from the medical schools of our state. It is a question if attendance upon such a course of study should not be obligatory upon all of us as a requisite for membership in our county or district societies. It is not enough to offer the members of our association medical defense against malpractice suits; we should offer them mental defense in the rapidly changing competitive market in which they must sell their wares.

We must find new avenues as an outlet for the idle time of the profession. Involved in the picture is the finding that the public does not seek, nor does the average physician report anything but a meager practice in the field of preventive medicine. This is true of immunization as well as periodic physical examinations. The average practitioner does less than ten health examinations a year. We complain that our health organizations are encroaching upon the field of preventive

medicine, but what are we doing to direct this work into the proper channels? Why should not the practitioner who delivers the baby keep a record of it from birth, and at the proper time see that it gets the proper preventive immunizations? He could well afford to do this for a nominal fee, and charge off the balance to good will. I can think of no better approach to the permanent establishment of the relation of doctor and patient, than one which begins in childhood.

It has been said that the average physician is not health minded, and if so, the lesson should be borne home to him that no matter how important are all the advances in sanitation, disease control, and governmental health administration to the public welfare, the significance of the individual practicing physician in maintaining the health balance of the public, is of no less consequence. This is a real part of the personal service which he has to offer, upon which he depends not only to contribute his share towards the protection of health and conservation of life to those whom he calls his patients, but at the same time to provide him with a means of livelihood.

If medicine is to retain control of its own affairs the average medical man must show more interest in medical organization, in order that medicine may use its united strength in meeting its responsibilities. One of our chief means of defense in the protection of medical ideals, is the solidarity of the members of the profession. Without the cooperation of the medical profession, no system of medical practice can succeed.

We must remember that Society will always seek to get medicine's services upon the best possible terms, and because of the universal need of medical service, it is the one, of all services, which is most exposed to the demands of socialization. On all sides of us we hear the threats of the leaders of the organizations that have been encouraging widespread propaganda for the socialization of all personal service, saying to the medical profession, that unless it socializes itself, socialization will be forced upon it. But they forget that no well organized body can be forced into any position. And please remember that



the county medical society is the unit in which the whole scheme of organized medicine is evolved.

Another phase of our problem to which we must turn our intelligent thought is the present oversupply and poor distribution of the members of our profession. One thing that adds to our difficulty in approach to this is that we live in a Democratic country, and limitation of opportunity is foreign to Democratic ideas. In a country like Sweden they probably have an ideal arrangement. They know just how many physicians are needed in the country, and designate the required number to enter the medical school. As no one is admitted from the outside, the number of licensed physicians is under complete governmental control.

In our own country it would seem well to start with a program of education. Our national, state, and county organizations should carry it into our high schools and colleges, calling attention to the situation which already exists, and the effects of overcrowding upon the chances of success, and enlisting the cooperation of college and high school faculties, in impressing this information upon their graduates. With the medical schools, of course, rests the chief responsibility of limiting the quota of physicians for the future, and they should be impressed with the necessity of drastic steps along this line. If the present rate of supply is continued, the number of persons per physician in 1940 will be 760, in 1960 about 730, and in 1980 about 690.

In addition to controlling the oversupply of physicians, it is equally and possibly more urgent at present to give thought to a wider and better distribution of the incoming members of the profession. In every state there is a definite tendency for the medical men to congregate in the larger communities. This also results in overcrowding which encourages fee splitting, unnecessary services, price-cutting, and other irregular trade practices, commonly designated as rackets. If we are to combat this tendency and encourage men to settle in the rural communities, we must help to make existence more profitable there. We must encourage the development of the com-

munity hospital in order that the rural practitioner may have access to a properly equipped workshop, and give his patients the advantage of x-ray and laboratory diagnosis, and we must preach through the county societies and the state organization, the gospel of loyalty to the local physician. Those of us who live in the larger communities must encourage his patients to believe that it is not necessary to leave home to secure adequate medical service in the majority of instances.

This then to my mind should be our defensive program. Our chief concern must be for the individual physician, for the success of the future of medicine depends upon the competence of the average practitioner. We must seek new avenues to consume his idle time and increase his income. We must encourage and increase his interest in medical organization, for therein lies his strength, and we must intelligently study and plan to overcome the oversupply of physicians which now exists, and we should work out a better system of distribution of medical service. And of our defensive objectives the greatest is competency, for without it, adequate medical care is impossible.

We are now ready to lay out an offensive campaign, which is related to the recipients of medical service. We must carefully plan a program, and consider the best means of winning to its support the public. Maintaining our vaunted individualism we have drifted along with the current. Unfortunately for the medical profession the direction of the current has been directed by those outside groups which regularly and consistently use propaganda. It is utterly futile for the doctor to struggle against the current of public opinion. His one hope lies in changing the direction of the current. And the only way the direction of the current can be changed is through propaganda in the interest of the medical profession.

There is no denying its power for it has brought into being every united effort of a people. It implants ideas into the minds of the masses of people, and controls their behavior to the smallest detail. The old theory of the beaten path to the best mouse trap and the best sermon was merely a sop,

thrown out, to men too lazy and too indifferent to get out among their fellowmen and give propaganda to their efforts. The people who have developed the idea of the socialization of medicine, have done it through the hypertrophied propaganda of organized charity.

Consequently the public hears of medicine as a pleasing romantic innocuous story, intended to arouse interest in medicine's contributions to civilization, but one, which incidentally implants the belief that the benefits of medicine should be bestowed as an unearned blessing upon the public. Such propaganda is in the interests of neither the physician or the public. It is time that medicine tell its own story in its own way, and by using the same weapons as those agencies which are striving to undermine it. It is time that we plan a campaign of education of the public, as to what scientific medicine can accomplish in the prevention of illness, the conservation of physical well being, and the treatment of all human ailments.

Our Woman's Auxiliary is already doing a fine work through their Committee on Public Relations in attempting to interpret the work of the medical profession to the lay public, but we should not expect them to carry the entire program.

This program should be definitely and carefully planned by our state organization, and carried into every section of our state through a corps of speakers, who will appear before luncheon clubs, Parent-Teacher Associations, and offer weekly programs over broadcasting stations. County societies might use to good advantage any surplus which they develop in their treasuries, to tell the public, through newspaper articles, that medical assistance today is one of the necessities of life, as is food, shelter, and clothing, and should be treated and purchased as such. Let's shift the emphasis from curative to preventive medicine and enlist the public's interest.

Another important phase of our program of education is related to medicine and charity. Medicine has always undertaken to give of its services to the indigent without compensation. It does this as a proper contribution by the profession to the welfare of man-

kind. But it is time to point out to a fair-minded public that its traditional spirit in this respect has been abused, and ask in all fairness if the medical care of the indigent is not an obligation of society as a whole, which should be borne in large part by the taxpayers, rather than asking one class of its citizens to shoulder the entire burden. Why should not the county society enter into contracts with city and county governments to care for the indigent on a reduced schedule of fees, distribute the work among its members, and give the individual the free choice of a physician.

Going back to our statement of principles we find that change is not always advancement, and must see that changes are in accord with sound permanent policies, and not simply concessions to short-sighted expediency.

With that thought before us let us look at health insurance as it is presented in its various guises of state medicine, corporate practice, practice by hospitals and universities, and contract practice, and see if they offer the solution to the problem of adequate medical care to our low income group.

The proponents of these schemes tell us that the crux of the problem is to bring doctors, dollars, and diseases into such helpful and continuous contact with each other, that the practice of medicine can keep pace with the science of medicine; and that the costs of medical care should be placed on a group payment basis, through the use of insurance, through the use of taxation, or through the use of both of these methods. They draw comparison between education and medicine, and show that the private practice of education failed, and that now society must look forward to providing health on the same basis as education, or else leave the medical profession in its present unfortunate plight.

Let us glance at state medicine in the countries which have tried it, and see how their plight compares with ours. In Europe where the working classes have given compulsory health insurance trial, it has been fully demonstrated that a poorer quality of medical care is furnished than the indigent sick in



America receive. This is due in part to the excessive number of calls upon the time and energy of the physician, for those who receive free medical care are constantly running to the physician for every trivial ailment, or compelling the doctor to make unnecessary calls at their homes. These unnecessary calls have reached such proportion in England that many penal physicians disconnect their telephones between 10 P.M. and 7 A.M.

In Germany they have had health insurance for the past 48 years and their percentage of pus appendix cases necessitating drainage is much greater than in the United States. Before the World War the average loss of time for sickness of the American laboring man was 6.2 days per year. In Germany it was 9.2 days per year. Since 1923 the loss in Germany has increased to 16.5 as against 6.2 for America.

Physicians in European countries tell us that social insurance has worked an injustice on the medical profession, that is only paralleled by its injustice to the sick, to whom it offers an inadequate, inferior grade of service. This type of practice interferes with free choice of a physician, breaks down freedom of opportunity, and by encouraging quantity practice, it lowers the quality of practice. One careful investigator says, "If there is any one fact apparent in relationship to all the systems of state and socialized medicine that have been developed throughout the world, it is that not one of them has been established as a success."

Corporate practice controlled by industry, or lay business, makes an employee of the physician, and subjects him to the influence and control of those who employ him.

Practice by hospital group clinics is unfair competition in that it utilizes endowments and tax funds to compete with private practice.

Another encroachment on the practice of medicine is contract practice. This has grown up out of keen competition for patients. Its advocates claim for it that it furnishes medical service at a low price, and induces patients to seek medical care more readily. But the

objections to it are overwhelming. It puts practice on a quantity basis, overloads the practitioner, and lowers the quality of work. It often produces cut throat competition, which demoralizes and causes rapid deterioration of the profession, and lowers the standards of practice. It destroys morale, which is the safeguard of the profession and the community, and medicine should do its utmost against it.

We have seen all of these schemes tried and have come to the conclusion that they are all fallacious; because, from the standpoint of medical care, you cannot handle humanity in the mass. The sick man is still an individual, a human being. Until we are convinced by proper research and scientific data that this viewpoint is wrong, we are likely to continue on the basic idea of personal relationship between doctor and patient as the necessary foundation for adequate medical care.

Time does not permit a discussion of the various health insurance schemes which are being offered in various parts of the country by lay business, to meet a popular demand for medical care at a reduced cost. These schemes, developed along commercial lines, have set up a competitive commercialism, which makes it almost impossible for the private individual practitioner to earn a living, they interfere with the free choice of a physician, they all carry the taint of the middleman's profit, they constitute a serious menace to medicine and to the public welfare, and tend to minimize or destroy the professional aspects of medical practice.

By this time I am sure that you are saying that he has run very far and fast, but he has failed to answer the chief challenge to our offensive program; that of providing adequate medical care to those of low incomes at a cost they can afford. Perhaps I might answer, as did Alice in Wonderland, that, in my country at the present time, you have to run very fast in order to stand still. Someone said recently that as the depression became worse the highway thumber finally came to the point where he was willing to go in any direction.

But we must not evade the question and briefly I shall outline for you where I believe the mind of organized medicine is turning. We realize that some plan must be devised to enable the low bracket income persons to obtain adequate care. We are firm in the opinion that any plan eventually approved must have the following safeguards: free choice of physician, benefits to be those of medical care only, no third party promotion profits, and control vested in the profession.

When the county medical society as a unit becomes the chief factor in organizing such a plan, then our offensive program will be complete and the problem will be solved. This is not a visionary ideal, it is already being tried in various communities. The Wayne County Medical Society, in which the city of Detroit is located, has such a plan in operation. They have made their headquarters a central co-ordinating center for those cases requiring assistance in obtaining and paying for complete medical service. The staff is composed of all the members of the society, and the patient is allowed to choose his own physician. All forms of medical service, including hospitalization, are furnished at a price that the patient can afford which is an amount determined by the business office of the society, and is paid to the society, and by it proportioned to the physician, the specialist, and the hospital. Employers of labor have been asked to co-operate, and are willingly doing so, agreeing to deduct so much per week from the patient's pay check, and remit to the society headquarters. The society makes a charge of 10 per cent of all monies collected to defray the cost of business administration. The most important part of the plan is that it places complete medical and hospital service within reach of every worthy patient, and it provides an easy payment plan for the liquidation of medical bills.

In our own state the Fulton County Medical Society has inaugurated a plan of selling medical service to people of low incomes on a monthly basis, allows free choice of a physician, and the society pays the physician chosen for his service. This is a most praise-

worthy experiment and you will hear about it in detail elsewhere on this program.

You will say that these plans are all right for the industrial centers but what about the rural districts. We will admit that this is a more difficult problem but not an impossible one. Why cannot the members of any county society get together, establish a definite schedule of lowered fees for people of low income, on the easy payment plan, and at the same time insist that the county authorities set aside some amount as a part of their yearly budget, to help defray the cost of medical care to the indigent. All that it requires to put such a plan in operation is co-operation, intelligent effort, and mutual trust.

This to my mind is our answer to the challenge of those who would socialize medicine. Medicine will retain control of its own affairs; its whole history of altruism and unselfish service justifies such a course. It will give to mankind the most competent service that it can attain, and it will not be ashamed to carry its banners into every forum of this nation, calling attention to the value of the service offered. It will seek new outlets for its professional activities. It will call to society's attention, in no uncertain terms, that the burden of the care of the indigent sick is the obligation of society as a whole. It will examine all plans which suggest changes in the scheme of medical affairs, but it will insist that such changes be based on sound principle, and not shortsighted concessions to public clamor.

We still insist that the practice of medicine is inherently a personal responsibility, and we will do all in our power to retain the personal relationship of physician and patient.

We will agree with those who suggest that the answer to the problem of medical care for those of limited income is group practice, but we shall take the county medical society as the unit and build group practice around it.

This then is the method whereby the medical profession can meet today's challenge—not through insurance, not through governmental or political agencies, but through its own organization, the county medical society.



## IN MEMORIAM\*

A. J. MOONEY, M.D.  
*Statesboro*

Into all of our earthly ambitions, aspirations and attainments, regardless of the walks in life and fields of activity, whether it be in the ripening years of life and retrospect that the "silver be loosed or the golden bowl be broken"; or whether at the time that we might conclude to be the height of our usefulness and the meridian of life and that laurels so long sought are almost within our reach that the "pitcher be broken at the fountain or the wheel broken at the cistern," death has always entered as a potential factor. The final, inexorable summons that calls from earthly labors to eternal rest has gone out to the cities, villages and hamlets throughout our state and the following of our medical brethren have answered the call:

Adkins, William Nevin, Atlanta, January 6, 1934, aged 50.  
 Akridge, Henry Alonzoe, Brunswick, December 17, 1933, aged 43.  
 Alston, N. Charles, Richland, December 31, 1933, aged 78.  
 Baker, Elliott, J., Jr., Columbus, December 4, 1933, aged 33.  
 Bennett, Jesse C., Jefferson, April 19, 1934, aged 65.  
 Benson, Norman E., Albany, July 4, 1933, aged 57.  
 Bush, Arthur Dermont, Decatur, September 6, 1933, aged 57.  
 Carson, Charles Calhoun, Talbotton, October 5, 1933, aged 47.  
 Childs, John Nathaniel, Ideal, December 29, 1933, aged 73.  
 Crittenden, Albert LeRoy, Shellman, January 25, 1934, aged 54.  
 Cromer, James Dawkins, Atlanta, August 31, 1933, aged 65.  
 Floyd, William B., Rome, January 18, 1934, aged 65.  
 Greene, William J., Ringgold, January 9, 1934, aged 63.  
 Hall, Charles Edward, Atlanta, October 22, 1933, aged 68.  
 Holliday, Paul Lovejoy, Athens, April 22, 1934, aged 41.  
 Houseworth, Delvous, Douglasville, April 18, 1934, aged 63.  
 Ingram, H. R., Coleman, April 29, 1933, aged 61.  
 Jennings, Emmaus M., Menlo, June 17, 1934, aged 64.

Jones, Willis B., Atlanta, March 3, 1934, aged 59.  
 Kea, Thomas Byron, Adrian, December 5, 1933, aged 54.  
 Kellogg, William Crissey, Augusta, February 13, 1934, aged 59.  
 McClure, George C., Ball Ground, October 19, 1933, aged 63.  
 McClure, James Henry, Cornelia, December 7, 1933, aged 69.  
 Meadows, Carlos Brown, Valdosta, December 8, 1933, aged 61.  
 Moore, George Young, Cuthbert, December 24, 1933, aged 65.  
 Oertel, Theodore Eugene, Augusta, June 28, 1933, aged 69.  
 Ogden, Daniel Holland, Odum, May 1, 1933, aged 65.  
 Parks, Frank W., Brinson, December 16, 1933, aged 50.  
 Reid, Robert Stephen, Savannah, January 4, 1934, aged 62.  
 Shaw, Henry William, Augusta, October 27, 1933, aged 51.  
 Story, Frank Crawford, Doerun, October 30, 1933, aged 37.  
 Terry, William R., Shellman, February 14, 1934, aged 71.  
 Thomas, Logan Lightfoot, Dawson, December 11, 1933, aged 68.  
 Vann, Henry A., Boston, April 18, 1933, aged 83.  
 Waits, Charles Edward, Atlanta, October 21, 1933, aged 44.  
 Walker, Nathaniel Pierce, November 20, 1933, aged 53.  
 Wallace, Fred R., Cordele, January 13, 1934, aged 77.  
 Wells, George R., Monroe, November 26, 1933, aged 65.  
 Witt, Marvin Sumter, Manchester, March 3, 1934, aged 48.

\*This is the list of members who have died since our last annual session as it appears on our records. Please notify the Secretary-Treasurer of any errors or omissions.

A hero may be defined as being one who, not in a spirit of martyrdom; not for self aggrandizement; not for the plaudits of the populace that fame may come; but rather in the great loneliness; without benefit of a helping hand; without thought of safety or danger for self; without hope of reward, and unafraid of the opposing odds enters the conflict that has as its only object of attainment the great humanitarian desire to render service to others even if it be so at the sacrifice of self.

How strongly do the great Hippocratic tenets of the medical profession stand out in

\*Memorial address before the Medical Association of Georgia, Augusta, May 10, 1934.

this definition! In the hearts and loving memories of the clientele and friends of our departed medical brethren remain everlasting proof that they kept the faith; some surrounded by all the modern helps of laboratory and hospital; others in lowly homes and with aught but the courage and will to carry on.

Would that time and suitable words permit me to express in epic what they have meant to their fellow men in their chosen field of activity!

To them the cry of the baby in pain; the lamenting of the woman in travail; the suffering in anguish of the body was a call to duty, whether it be in the dead stillness of night, or weather that would halt the strongest will of any but the doctor; sometimes remunerated; sometimes recompensed by the relief of pain or the appreciative smile of a grateful mother; sometimes the only remuneration the consciousness of a duty well performed; they served as best they could.

Seeing evidence daily of the frailties and fancies of men they must have been philosophers and learned the great lesson that strength comes through resistance. While perfection on this earth has never yet been attained, still there are so many ideals that can be taken from the lives they lived that would be helpful to the living. We may liken such ideals to the stars; we will not succeed in touching them with our hands; but like the seafaring man on the trackless waste of desert waters, we will choose them as our guides, and following them, reach our destiny. Their lives have been a benediction to the communities where they lived.

All may not lie in their eternal sleep beneath imposing monuments or massive granite slabs; but memories of their lives of usefulness will long, long remain in the minds of those restored to health by their ministrations and services to humanity.

Their names are written on the honor roll of the Association. Their mortal remains rest free of fret and pain in the great, silent cities of the dead until the morn of the Great Awakening.

May they rest in peace.

## PRESENTATION OF THE "BADGE OF SERVICE" TO THE PRESIDENT, CHAS. H. RICHARDSON, M.D.\*

S. T. R. REVELL, M.D.

*Louisville*

The privilege is mine to present from the Medical Association of Georgia its token of love and esteem to one who for many years has manifested his untiring interest in the welfare of organized medicine.

The desire to be of service to humanity is the motivating force that prompts most men to choose as their life's work the broad field of medicine, and as this desire is an integral part of him who for the past year has directed our policies, mapped our course, and safely steered our ship of state through these rapidly changing conditions, it behooves us to inquire what manner of man is this our President.

In order that we may answer this query, let us casually glance at his ancestry. His father, a physician, was a man of stern character and strong convictions. Early in life, he determined to follow the course that seemed wisest and best to him. He walked in the middle of the path, paid fealty to no one but God, was loyal to those to whom loyalty was due, and never contracted a debt in his life. Our President possesses all of these characteristics and, to these, he has added kindness, friendliness, and a desire to serve humanity.

While yet a youth, he began preparing for his life's work by matriculating at Emory University, from which institution, he graduated four years later with the degree of Bachelor of Philosophy. The next year he began his formal study of medicine at Columbia University and, from this famous seat of learning, in 1909, he received the degree of Doctor of Medicine.

Having the wise counsel, precept, and example of his father, he naturally had before him a definite goal, towards which he di-

\*Delivery of the "Badge of Service" to the President before the Medical Association of Georgia, Augusta, May 9, 1934.



rected his energies. After graduating from Columbia, he received an appointment as intern at Bellevue Hospital, New York City, where he remained for two years. With the knowledge and experience thus gained, he went to Macon and began the practice of medicine in that city. He continued in general practice for about thirteen years, but for the last ten, he has specialized in surgery. During these years, he has been connected with the Macon hospitals and is now Director of the Middle Georgia Sanatorium. He is a Fellow of the American College of Surgeons.

His loyalty and devotion to organized medicine are only subordinate to his desire to serve humanity and for more than twenty years he has devoted his untiring energy to the best interest of the Medical Association of Georgia.

Forsooth, he must have caught the vision contained in the saying of the Great Physician that: "Whosoever will be chief among you let him be your servant," for the watchwords of his character are devotion to duty, loyalty to friends, and the desire to be of service in whatsoever circumstance he may be placed.

Coming thus splendidly endowed by heredity, training, and sterling character, you have fulfilled with honor the duties of the high office to which your brethren elected you and it is only meet that to you, Dr. Charles H. Richardson, should be awarded this token of our appreciation and affection, the "Badge of Service" of the Medical Association of Georgia.

#### ACCEPTANCE OF THE "BADGE OF SERVICE"\*

CHAS. H. RICHARDSON, M.D.  
*Macon*

In the presence of this great gathering of the medical profession of my state, and with the words of this generous tribute still sounding in my ears, I stand before you in deep humility. It is a great honor to be

President of the Medical Association of Georgia, and one of which I am justly proud. I trust that I have in some part measured up to it.

If someone should ask the greatest thrill that I have received as the head of this organization, I would answer "the friends that I have made."

In accepting this badge of service, I wish to express my deep appreciation of all that it represents, and of something equally fine, a wonderful experience in fellowship.

I thank you.

#### ACCEPTANCE OF POINTER GIVEN THE ASSOCIATION BY DR. C. K. SHARP, ARLINGTON

CHAS. H. RICHARDSON\*, M.D.  
*Macon*

If you will pardon me for digressing just a moment, I want to give credit where I think credit is due. This organization has gone along for some eighty-five years without an efficient pointer. It usually had an amateur pointer and sometimes had none at all. One of our good members, equally a good artisan as well as a good practitioner of medicine, came to the rescue and designed and presented to this organization an official pointer. That pointer I hold in my hand, and I want to take this opportunity to thank Dr. C. K. Sharp of Arlington, Georgia, for this very nice pointer.

I have two reasons for delivering this little speech. One is to give Dr. Sharp credit and also possibly from a very selfish standpoint I hope that at some time Dr. Sharp will see fit to honor me with one of his famous walking sticks.

#### THE AUGUSTA SESSION

The recent session of the Association in Augusta was one of the most successful in its entire history due to the excellent arrangements and loyal cooperation of the Richmond County Medical Society. The official list of officers and committees will appear in the July Journal.

\*Acceptance of the "Badge of Service" by the President before the Medical Association of Georgia, Augusta, May 9, 1934.

\*Acceptance by the President of the Association at Augusta, May 10, 1934.

## A THEORY EXPLAINING THE EXCITATORY AND INHIBITORY FUNCTIONS OF THE NERVOUS SYSTEM, ESPECIALLY THOSE OF THE BRAIN\*

JAMES N. BRAWNER, M.D.  
*Atlanta*

It is an accepted fact that in all parts of the brain and spinal cord there are specific systems or groups of neurons whose functions are excitatory; that is, they initiate and accelerate mental and bodily reactions. It is believed also by many authorities that there are specific inhibitory neurons and centers whose functions are to stop or to retard stimulus-response impulses, thus delaying psychomotor reactions, and coordinating them to environmental stimuli. Since the excitatory and inhibitory functions are antagonistic to each other, it is through their combined actions that mental and bodily reactions are kept in a state of balance. As examples of the well-known antagonistic neural mechanisms controlling bodily functions, I shall mention the fact that the blood vessels are supplied with contractor and dilator nerves for the regulation of their size and tone; the movements of the intestines are regulated and balanced by specific excitatory and inhibitory centers. The same may be said of the respiratory movements. But one of the best known and most distinctive examples showing the balancing effect on an organ supplied with both accelerator and retardator mechanisms is the control of the rate of action of the heart beats through the antagonistic vagus and sympathetic systems. If the vagus center is depressed or destroyed, tachycardia is the result; if it is over-stimulated, bradycardia occurs. Conversely, tachycardia may result from over-stimulation of the sympathetic centers, or bradycardia may occur from paralysis of the sympathetic centers. Then too, cardiac arrhythmia is often due to an irregular imbalance between the excitatory and inhibitory mechanisms controlling the actions of the heart. These antagon-

istic mechanisms are cited to show the necessity of inhibitory control in maintaining a balance not only of the organs of the body, but also of the activities of the brain and mind. If the same principle is applied to disorders in the functioning of the excitatory and inhibitory mechanisms in the brain, we may expect to observe minds that act too swiftly (tachyphrenia), as is seen in mania; or mental reactions that are too slow (bradyphrenia), as is observed in depression; or an irregular imbalance in the intellectual or emotional faculties manifested by a disorderly acting mind (arhythmophrenia).

Many theories have been advanced as to the nature of the inhibitory functions displayed in the central nervous system, but probably the most plausible hypothesis is that advanced by Dr. J. Ramsey Hunt. He is of the opinion that there are specific inhibitory neurons in all parts of the nervous system whose sole function is to restrain or neutralize excitatory nervous action. Hunt believes also that in the cortex of the brain, as well as in the basal ganglia, the inhibitory neurons are the small Golgi's cells type 2, which are small neurons with short axis cylinders, and that "all nerve centers, including those of the psychic level of the cerebral cortex, are composed of both erethitic (excitatory) and kolytic (inhibitory) cells associated with the specific functions of excitation and inhibition."

Dr. Ralph S. Lillie says it has been experimentally proved that if an electrically excited nerve impulse is met by a neural impulse coming from the opposite direction, they neutralize each other.\* From this fact it may be deduced that the inhibitions act in a similar manner in retarding or arresting excitatory nervous action. It substantiates also to some extent Hunt's belief in the existence of cortical inhibitory neurons. When the experimental facts cited by Lillie are combined with the hypothesis of Hunt, a beautiful theory explaining the functioning of all parts

\* "When the current passes in the opposite direction its effect is inhibitory instead of excitatory: i.e., it checks or annuls an already existing activity or renders the resting nerve temporarily less sensitive." Ralph S. Lillie, "The Physical Nature of Nervous Action," *American Journal of Psychiatry*, November, 1929.

\*Read before Fulton County Medical Society, Jan. 18, 1934.



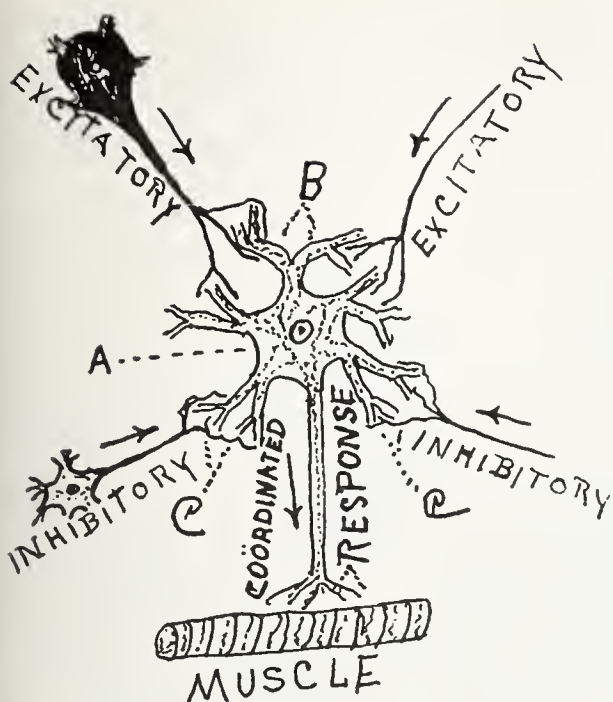


FIGURE 1.

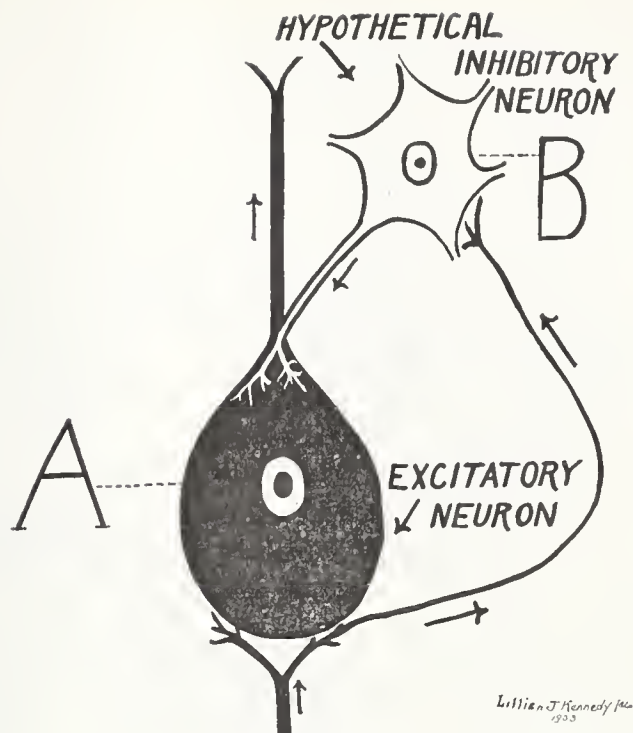


FIGURE 2.

of the nervous system, including that of the cerebral cortex, may be formulated.

In studying the effects of cerebral excitation and inhibition it should be remembered that an excitatory neuron or center is one that discharges into a *response*, such as the contraction of a muscle, the secretion of a gland, or the production of a thought or an emotion; while an inhibitory neuron is one that discharges into an excitatory neuron in such a way as to retard, coordinate or even stop the excitatory impulse.

On the following pages are shown four schematic diagrams illustrating my idea of such a mechanism of inhibition and excitation, each diagram being accompanied by a brief description. While such a mechanism has not been definitely proven, yet it forms a splendid working hypothesis in explaining the functioning of all parts of the nervous system.

*Description of Figure 1.*—The above diagram represents in a schematic way a neuron (A) in a constant state of nervous tension, ready to discharge into a response when properly excited or stimulated. Bearing in mind that a neuron can discharge in only one direction, that is, through the axone, and that it is constantly receiving impulses through numerous dendrites from various sources which pass into the cell body in different directions,

it is reasonable to assume that impulses entering the neuron through one set of dendrites may have a tendency to retard or lessen the intensity of impulses coming through other dendrites. On account of this fact, I assume that impulses entering a neuron farthest away from the axone are excitatory; while those entering through the dendrites nearest the axone have a tendency to retard or to lessen the intensity of the discharge and are therefore inhibitory in action. In Figure 1 the neuron (A) receives excitatory impulses through the dendrites (B) which are farthest away from the axone, and it also receives inhibitory impulses through another set of dendrites (C) which are located on the cell body near the axone. I assume that in this way the excitatory and inhibitory impulses have a tendency to travel in opposite directions over the lipoid films in the body of the neuron, thus neutralizing or inhibiting the action of each other.

*Description of Figure 2.*—The above schematic diagram represents in a simple way my belief as to the relation existing between an excitatory neuron (A), and an inhibitory neuron (B), which, for purposes of distinction, are colored respectively black and white. It may be noticed that the inhibitory neuron discharges into dendrites on the excitatory

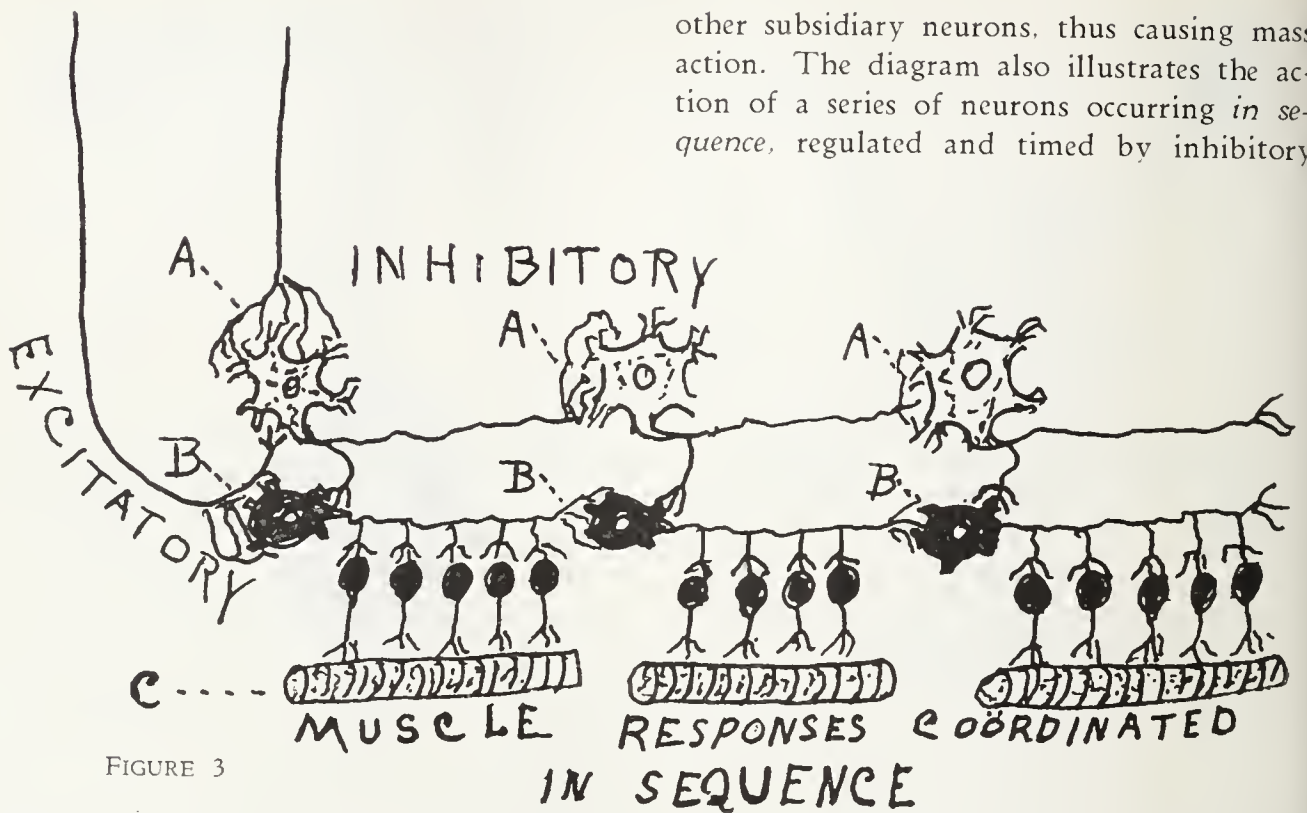


FIGURE 3

neuron near the axone, the inhibitory impulses thus meeting and neutralizing the excitatory impulses coming through the cell body from the *opposite direction*. In this way, I surmise, the inhibitory impulses are able to retard or even to completely arrest the excitatory impulses. By this mechanism, an excitatory neuron may be kept in a state of inactivity until the nervous tension in its cell body is of sufficient strength to overcome the resistance offered by the inhibitory impulses. The strength of the nervous tension in the inhibitory neuron, while automatic, may be either increased or diminished by impulses received from other neurons, even from those in distant parts of the nervous system. On account of this, the strength of inhibition may be increased or diminished. The nervous tension in the excitatory neuron is also automatic in its genesis, though it may be increased or diminished by impulses coming from other cells, and it is only when the nervous tension is of sufficient strength to overcome the inhibitory resistance that an excitatory impulse discharges into a response.

*Description of Figure 3.*—The above diagram represents excitatory neurons (B) and inhibitory neurons (A) connected *in series*. In other words, when a *master* excitatory neuron (B), discharges, it does so into numerous

other subsidiary neurons, thus causing mass action. The diagram also illustrates the action of a series of neurons occurring *in sequence*, regulated and timed by inhibitory

neurons. In other words, the activity of one series of neurons sets into motion, at a slightly later time, another series; the action of the later then sets into motion another, and then still another series. In this way we get the contraction of the auricles of the heart before that of the ventricles, and the contraction of one part of the stomach or intestines before the contraction of the succeeding parts. The inhibitory neurons when connected in series, by retarding excitatory action, are able not only to regulate mass action, but also to cause action in orderly sequence, as is seen in peristalsis, in walking, or in the beautifully timed and coordinated movements of a crawling snake. At this point I may state that the *association of ideas* is probably due to the activity of a series of cortical neurons setting into motion another series, which in turn sets into motion still another, and so on ad infinitum.

In the case of peristalsis of the stomach or intestines, the inhibitory neurons may hold the excitatory neurons at rest for hours at a time; while in the brain the inhibitions may keep certain emotional or ideational centers in a state of complete inactivity for months or even years.

*Description of Figure 4.*—The shaded portion of the above diagram represents the relay



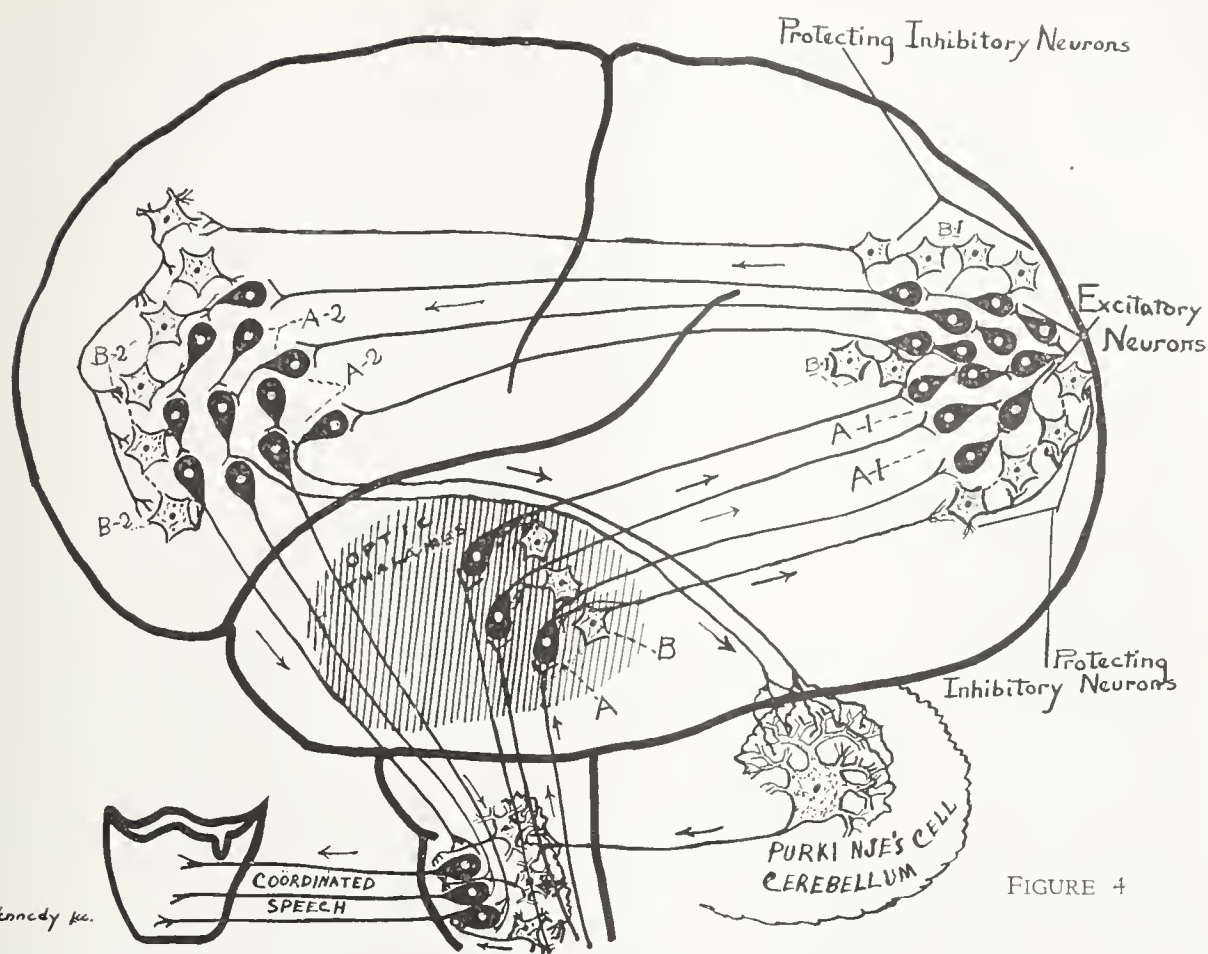


FIGURE 4

stations for sensory stimuli located in the optic thalamus. The white star-like characters (B), represent the inhibitory neurons, and the black, oval-shaped cells (A), the excitatory. Apparently all sensory stimuli on reaching the thalamus are filtered and selected. In this way only the essential stimuli are allowed to reach the cerebral cortex. It is thus likely that the inhibitory functions play a very important part in arresting, in the thalamus, non-essential stimuli, allowing them to go no further. The black, pear-shaped figures (A-1), located in the posterior portion of the cortex, represent cortical excitatory neurons which, when stimulated, cause the formation of perceptions, ideas, thoughts and emotions. The white, star-like characters (B-1), represent inhibitory neurons which prevent the vicarious stimulation of the excitatory centers. In the frontal lobes the excitatory centers (A-2), are motor in function. It is probable that the inhibitory neurons (B-2), in this region are able to arrest or retard all particularized movements of the body. For example, a person may have an inclination to speak, yet the in-

hibitory neurons in his frontal lobes are able to arrest the excitatory discharges before they reach the vocal organs, thus enabling him to remain silent.

#### *Thalamic Inhibitory Functions.*

Man, with his highly developed special senses, is constantly receiving, simultaneously, millions of environmental stimuli, all of which, with the sole exception of the olfactory, are relayed in the thalamus. The inhibitory functions of the thalamus apparently arrest the great majority of incoming sensory impulses, permitting them to go no further. *The cerebral cortex is thus spared the trouble of receiving non-essential stimulation.* Only the essential stimuli, appropriate for the time being and for the proper responses, are allowed to "filter through" the thalamus to the cortex of the brain. Such a mechanism permits perception of the environment to be coherent, analytical and orderly. Were it otherwise, the perceptive faculties would be in a constant state of confusion through receiving too wide a variety of stimuli.

It is possible that the main mechanisms for

sleep are located in the centers about the thalamus, such centers being able to inhibit or arrest all afferent impulses at the thalamus through a periodic physiological process. Biologically, it certainly would be economical for normal sleep to be produced by a thalamic inhibitory mechanism by causing the gradual arrest of all sensations before they reach the cerebral cortex. For the same reason, the thalamus is also an ideal location for a "trigger" inhibitory mechanism which stops quickly all incoming stimuli, thus rapidly producing unconsciousness in such conditions as traumatic coma, narcolepsy, fainting, and hysterical or hypnotic trances.

Inhibitory functions in the thalamus may become disordered from several causes. They may become abnormally excited, arresting at the level of the basal ganglia special groups, or even all incoming sensory stimuli; or they may become paralyzed, thus allowing an indiscriminate "spraying" of the cortex with non-essential stimulation; or they may be destroyed by organic lesions, as is seen occasionally in encephalitic processes. Thus, an excitation, paralysis or destruction of the thalamic inhibitory functions may cause mental symptoms characteristic of definite pathological conditions.

#### *Hyperactivity of Thalamic Inhibitory Functions*

If the thalamic inhibitory functions are over-active, as is seen occasionally in cerebral trauma, epidemic encephalitis, or tumors involving the thalamic region, there is a tendency to stop *all afferent stimuli* at the thalamus, in which case the cerebral cortex is without stimulation, and the person is in a state of coma, provided the inhibitory process is complete. If the inhibitory hyperactivity happens to be due to some pathological lesion—say, a tumor or encephalitis—the conditions known as pathological somnolence or narcolepsy are observed. It is reasonable to suppose, also, that a severe emotional shock or a sudden localized vasomotor spasm in the thalamic region, by irritating the inhibitory mechanisms, may cause a sudden loss of consciousness or fainting attacks. Then too,

it is probable that unconsciousness or coma in cerebral trauma is not due to cortical shock, as is generally supposed, but is caused by a hyperactivity of the inhibitory functions about the thalamus. As is well known, the cortex of the brain will stand much mutilation without any apparent effect on consciousness, yet, as all neurosurgeons know, if the injury or irritation is near the thalamus or third ventricle, coma is likely to supervene. In the latter case, it is likely that the injury irritates the thalamic inhibitory mechanisms, arresting all incoming stimuli, thus leaving the cerebral cortex without stimulation, which means unconsciousness.

#### *Hypoactivity or Destruction of the Thalamic Inhibitory Functions*

It is probable that mental confusion, as is so often seen in the toxic psychoses, is due to a temporary paralysis of the thalamic inhibitory mechanisms, which may be caused by toxins that have a selective affinity for the neurons of certain inhibitory functions. According to this theory, at least some of the confusions, deliriums and hallucinated states are due to numerous unassorted stimuli, which normally would be arrested at the level of the basal ganglia, reaching the cerebral cortex. Even in some cases of brain injury involving the base of the brain, there occur mental confusion and delirium. In such patients it is probable that the thalamic inhibitory centers are paralyzed, which allows an indiscriminate flow of incoming stimuli into the cortex.

The above hypothetical conclusions are supported, to some extent, by pathological lesions found in the human brain and by experiments on animals, which seem to indicate that the gray matter of the tuber cinereum—which is at the base of the third ventricle and which is closely associated with the thalamus functionally and anatomically—has something to do with its inhibitory control (Von Economo). As has been shown by the case reports of numerous authors, irritation of these centers by tumors, located in or near the thalamus or at the third ventricle, causes somnolence or even coma. Then too, Demole has shown that the injection of calcium chloride solutions in the floor or walls



of the third ventricle causes profound sleep, or what is known as narcolepsy.

*Psychogenic Stimulation of the Thalamic Inhibitory Functions*

Apparently there are also small, yet distinct, inhibitory mechanisms in the thalamus which act independently of one another, and which control certain specific stimuli; for instance, those of sight, hearing, pain or touch. It is probable that hysterical patients learn to utilize these particularized functions psychogenically in the production of the various forms of anesthesia. According to this theory, in hysterical hemianesthesia, the inhibitory centers arrest either some or all of the somatic stimuli that reach the thalamus from *one side of the body*. The cortex of the brain is thus unaware of any sensation of touch or pain on the affected side. The same mechanisms may prevail also in hysterical blindness or deafness. It is very likely that the "dissociations" of nervous function that are supposed to cause the symptoms of hysteria, double or multiple personality, or hypnotic states, are brought about, to a large extent, by unconscious psychogenic stimulation of certain inhibitory mechanisms in the basal ganglia, which prevents somatic stimuli from reaching the cortex of the brain.

*Striatal Inhibitory Functions and Their Disorders*

There are not only inhibitory mechanisms for the arrest of afferent stimuli, but also those which retard or arrest efferent impulses at different levels in the effector or motor parts of the nervous system. Doubtless, many of these are in the frontal lobes, but it is probable that the more distinct mechanisms for the control of our synergistic actions lie in the striatum, the old motor brain. Outgoing nervous impulses to the muscles must be "selected," otherwise motor activity and behavior would be disordered and incoherent. Thus it is seen that the inhibitory functions play an extremely important role in the control of our actions. The presence in abnormal cases of many pathological lesions and degenerative processes in the floor and side of the third ventricle indicates that there are specific inhibitory centers which control the motor functions of the striatum. For in-

stance, Morgan and Gregory have reported degenerative changes in the neurons in the gray matter about the tuber cinereum in many cases of idiopathic epilepsy, indicating that in some cases of epilepsy there is a deficiency in the inhibitions about the striatum. Many hysterical conditions also, such as convulsions, paralyzes and contractures, may be explained by disordered inhibitory control of the striatum. In fact, most cases of cataplexy and catatonia, both of which may be hysterical, toxic, or even organic in origin, probably are due to inhibitory disturbances. It is well known that organic lesions in or near the striatum, which involve both the inhibitory and excitatory mechanisms, may cause such disorders as paralysis agitans, chorea, athetosis or contractures of various types.

*Cortical Excitatory and Inhibitory Functions*

To understand properly cortical inhibitory functions, it is necessary to remember that there are particularized excitatory centers, in fact thousands of them, each of which, when stimulated, produce specific perceptions, ideas, thoughts and emotions. When a group of such centers is stimulated either normally or vicariously the person is conscious of the particular thoughts or feelings that the excitatory neurons normally produce. For example, all of us have in our brains specific groups of neurons which, when stimulated in a particular way, produce the "feeling of despair." Ordinarily the inhibitory neurons keep our "despair centers" in a state of inactivity, and we are unconscious of the fact that we have in our being a despair mechanism. If, however, through the processes of worry, toxins, or organic lesions, the inhibitory neurons are weakened or destroyed, vicarious nerve impulses discharge into the "dispair mechanism," and the person feels, and cannot help but feel that he is in a state of despair. Then too, we have centers which, when stimulated, give us the feeling of happiness, joy, love, hatred, jealousy, suspiciousness, etc. Recently an epileptic patient told me that she felt "so very happy," and her expression indicated that she was extremely joyous; yet if this poor old epileptic had anything in this world to make her happy, I do not know what it

could be. Her "happiness centers," however, were being stimulated vicariously through a release of the inhibitory functions. Likewise, the paralysis of the inhibitions that control the flow of nervous energy into the "fear centers" allows a false stimulation of them, and may cause a phobia or an anxiety psychoneurosis. Motor and mental agitation too, a condition so often seen in melancholia, cortical encephalitis, paresis, or even in meningitis, is, in most instances, due to either a paralysis or a destruction of the cortical inhibitory functions, which allows an indiscriminate flow of cortical excitatory impulses, characterized by incoördinate ideas and emotions, and also by agitated motor activity.

It is plausible to suppose that if certain specific inhibitions which protect an ideational center from non-essential stimulation should break down, it will cause the same ideas and emotions to pass through the mind "again and again," a symptom that is so characteristic of the obsessions. Such ideas are often called imperative ideas or thoughts. Occasionally, patients of this type state, "When I get certain ideas in my mind, I cannot get rid of them," which means that the same ideational centers are stimulated, vicariously, over and over. In addition to the obsessions, the tics and compulsions may result also from the paralysis or destruction of an inhibitory mechanism in the motor area of the cortex. Conversely, over-activity of small localized inhibitory functions by preventing the normal stimulation of perceptive or ideational centers apparently causes such symptoms as the inability to recall names, dates and unpleasant experiences. In such conditions, the loss of memory is due to a localized cortical inactivity or amnesia. Then too, the patchy, stocking or glove anesthetics, so frequently seen in hysterical patients, are explained by the inhibition of definite sensory areas in the cortex, producing a localized dissociation of cortical function.

In some disorders, especially in hysteria and in some cases of dementia praecox, the mental fields are contracted through massive inhibitory action in which the association

noia, dementia praecox, melancholia and all types of the organic psychoses. processes are restricted and narrowed. Such a condition may be termed *stenophrenia*, which means contracted mind. Stenophrenia has its analog in tubular vision or the contraction of the visual fields, as is often observed in hysterical patients. It should be remembered, however, that a contracted mind may result, not only from psychogenic reflexes, but also from toxic states, cerebral arteriosclerosis, paresis, encephalitis or tumor, any one of which may over-excite the cortical inhibitory functions. In hysterical stenophrenia, it is possible that the patient forces into inactivity the functioning processes of large sections of the cerebral cortex by over-exciting, psychogenically, the inhibitory mechanisms.

It is probable that the repressions, too, are brought about by the prolonged inhibition of certain emotional centers, which prevents a normal discharge of nervous energy. If the repressions last over too long a period, the emotional centers become surcharged with energy, which, striving to escape, finally will escape through either normal or abnormal channels, thus causing many of the symptoms so characteristic of the psychoneuroses.

#### *Mental Arhythmia (Arhythmophrenia)* *The Disorderly Acting Minds*

Judging from analogy, it is quite likely that many of the irregular periodic or bizarre psychomotor symptoms which occur in many mental disorders are the result of an irregular imbalance, which may be either general or local, between the cortical excitatory and inhibitory mechanisms. Such disorders are characterized by either mental or behavior arhythmia, analogous in origin to the cardiac arhythmias. In this group may be classed many of the mixed, irregular, bizarre, intellectual or emotional symptoms. These may be observed in every conceivable combination and every degree of intensity. In these conditions, the distinctive fact observed is a *disorderly acting mind*, which may be either predominantly emotional or intellectual. Patients presenting symptoms of mental arhythmia may be found among the anxiety



and obsessional psychoneurotics, as well as among the victims of toxic psychoses, para-

*The Atavistic Mind (Paleophrenia)*  
(*Cave Man Behavior*)

All psychiatrists have observed, and doubtless many have speculated upon, the atavistic behavior displayed by mental patients who revert emotionally, intellectually and expressively to the reactions of their remote ancestors. For instance, many patients have a tendency to undress themselves and go unclad, while others tear into bits pieces of paper or clothing. Some will curse, sing, shout or fight; or they may jump, run, skip and dance, all of which activities are out of keeping with their environment, and remind one of the behavior characteristic of our cavemen ancestors or even that of animals. Such behavior may be explained by recalling to mind that for thousands of generations our ancestors lived in the forests, hunting wild animals for food and fighting enemies for their very existence. It was during this period in the history of the race that woman learned to scream when approached by a strange man, and also during this period that both men and women learned ceremonial and warlike dances. Civilization has repressed in all of us these deep fundamental instincts and cravings by developing inhibitory mechanisms for the purpose of restraining such desires. When a woman says, "I feel like screaming," it means that her "screaming centers" are supercharged with energy which strives to escape, and, if the inhibitory neurons which guard the screaming mechanisms should fail, either functionally or on account of organic lesions, she will be compelled to scream regardless of her voluntary efforts to refrain. Such a patient, if sufficiently oriented, will voluntarily state that she "screams simply because she cannot help it." Probably all of our primitive instincts, which are only occasionally and partially used, are protected and guarded by inhibitory mechanisms that have been developed through a process of training, and which enable us to repress into inactivity our atavistic cravings. If the specific functions which hold in check the desires of a person who wishes to go unclad, or to shout, scream,

dance or fight, should become paralyzed or destroyed, say by an emotional shock, or by toxins or organic lesions, there are no protective mechanisms left to guard the activity of the centers that crave to discharge their "pent-up" nervous energy. In such a condition the person is compelled to scream, shout, dance or fight, the type of behavior depending on the chain of particularized centers involved. Furthermore, it should always be borne in mind that patients of this type are as unable to control their emotions, thoughts and behavior as the epileptic is to control his convulsions. To me, it appears that an apt word for such atavistic mental reactions is *paleophrenia*, which means "old or atavistic mind."

The failure of certain inhibitory mechanisms, most likely, is the cause also of many delusions, especially those seen in the acute and subacute toxic psychoses. For example, the fear of being poisoned, which is extremely common; or of being injured or persecuted, either directly or indirectly. Such delusions are based on the old and fundamental instinct of "watching the other fellow" to prevent poisoning or personal injury, a faculty essential in the early stages of human development. If the primitive centers for "watching people to prevent poisoning or physical injury," which normally lie dormant and inactive, are vicariously stimulated through the breakdown of protecting inhibitory functions, the patient feels, and cannot help but feel, that he is to be poisoned or injured by those about him. This is the case, especially, if the reasoning faculties are impaired. Patients of this type frequently try, through a process of reasoning, to convince themselves that they will not be poisoned or injured; yet, the "feeling" that they will be usually predominates, at least until recovery commences.

To illustrate some of the imbalances seen between the cortical inhibitory and excitatory functions, short extracts from the following case-reports are given:

Case 1.

*Diagnosis:* Senility; arteriosclerosis; contracted kidney.

**Mental Symptoms:** Tachyphrenia; compulsions (screaming, shouting); psychomotor agitation.

Woman, 78 years of age. Suffering from a senile psychosis of the agitated type. Mental examination shows that her intellectual faculties have deteriorated to some extent, though her insight as to her condition is good, and, considering her age, her intellectual clarity is fair. Under slight emotional excitation she becomes agitated, and at times she screams and shouts in a loud tone of voice. Her thoughts and emotions are accelerated.

*Comments:* Almost daily she asks me, "Doctor, why is it that I scream, talk so much and so fast, and can't help it?" When asked if she always talked rapidly she answered "No," and that until recently she was able to control her thoughts and speech. In this patient, I assume that the tachyphrenia and compulsions (screaming and shouting) are due to senile deterioration of the inhibitory neurons in the cortex of the brain, which permits the ideational, emotional and speech centers to discharge too freely.

#### Case 2.

*Diagnosis:* Paresis; Maniacal type.

**Mental Symptoms:** Tachyphrenia; marked psychomotor agitation.

Man, aged 43, suffering from paresis of the maniacal type. His symptoms are characterized by an astonishing rapidity in psychomotor activity. His mind and speech, together with all movements of the body, are literally racing in an incoordinate manner.

*Comments:* In this patient it may be assumed that the inflammatory and degenerative processes in the cortex of the brain have either destroyed, or at least paralyzed, the inhibitory functions, allowing the excitatory centers to discharge incoordinately and without restraint.

#### Case 3.

*Diagnosis:* Mania-depression; mania.

**Mental Symptoms:** Tachyphrenia; flight of ideas, feelings and movements.

This patient is suffering from an ordinary attack of mania. He is too emotional, and

his thoughts, feelings and speech are all accelerated. Like most patients suffering from mania, his thoughts and emotions are flighty.

*Comments:* The tachyphrenia observed is probably due to a diffuse release of the cortical inhibitions, an explanation first offered by Dr. Ramsey Hunt. In this patient the paralysis of the cortical inhibitions is caused probably by a chemical imbalance, or perhaps by a toxin generated in the fluids and tissues of the body, as he is sixty-two years of age, has a chronic nephritis and never suffered from a previous attack. It should be remembered, however, that sudden emotional shocks may "tear through," or prolonged irritating situations of a psychic nature may "wear out," the protecting inhibitory mechanisms, thus causing a manic state. Then too, strong emotions acting through the endocrine system may produce a chemical imbalance in the tissues of the body which may react upon the brain, producing maniacal symptoms.

#### Case 4.

*Diagnosis:* Mania-depression; depression.

**Mental Symptoms:** Bradyphrenia.

This patient is in the depressive stage of mania-depression. He is quiet and has but little to say. His thought processes are slow and his emotional reactions are at a low ebb.

*Comments:* It may be assumed that the prolonged over-action of the excitatory centers during the previous maniacal state has resulted in an exhaustion of the excitatory neurons. His cortical ideational and emotional centers are now resting and are regaining their strength and functional integrity. It should be recalled, however, that some patients are depressed before entering a state of mania; in these, it is probable that the cortical inhibitory functions, as explained by Hunt, are primarily excited, thus causing a mental retardation.

#### Case 5.

*Diagnosis:* Dementia Praecox; catatonia.

**Mental Symptoms:** Bradyphrenia; stenophrenia (contracted or narrowed mind).

A young man, aged 22. A typical case of dementia praecox of the catatonic variety.



He has a blank facial expression and speaks only when spoken to, and then he says only "yes" or "no" or "I suppose so." On observation it is apparent that his mental fields are contracted (stenophrenia), that it is difficult for him to think, reason or speak. When walking his movements are slow, and it is necessary for the nurse to push him along.

*Comments:* Since his disorder developed rather suddenly, it may be assumed that some toxic or at least some chemical disturbance stimulates the cortical inhibitory functions to over-activity, which restricts the normal flow of his emotions, thoughts, speech and the movements of the body. In considering the mental mechanisms involved in patients of this type, it should be remembered that specific toxins generated in the tissues of the body may have a selective affinity for the inhibitory centers, thus exciting them to over-activity. Recovery from the catatonic state occasionally occurs rather suddenly, indicating a sudden release of the thalamic and cortical inhibitions.

#### Case 6.

*Diagnosis:* Infectious-toxic psychosis.

*Mental Symptoms:* Horrible fears of being poisoned or injured.

Man aged 47 years. Enjoyed good health until about six months ago. His teeth became badly infected and about four weeks ago they were extracted. Soon afterwards he became nervous, having a feeling of apprehension. Almost suddenly, he developed a horrible phobia in which he imagined that he was to be poisoned, or that he would be injured or shot. He begged to be confined in a jail so that he might be protected from his imaginary enemies. While riding in an automobile he lay on the floor of the car so as not to be observed by those who might hurt him. It was necessary to feed him artificially, as he feared that the food was poisoned. He screamed and fought when attendants entered his room, thinking that they, too, were coming in to murder him. After a period of three weeks his horrible fears suddenly disappeared. Upon recovery he could remember the states of feeling he experienced

while ill and could describe them clearly. He often asked me for an explanation as to "Why should I develop suddenly such horrible fears?"

*Comments:* The most plausible explanation for such a condition is to assume the occurrence of a temporary paralysis of the inhibitory neurons, which normally protect the "fear centers" from abnormal stimulation. In a patient, such as the above, I believe that the fear centers are vicariously stimulated, and he feels, and cannot help but feel, that he is to be poisoned or shot. Such a theory, of course, assumes that there are specialized centers for the different types of fear.

#### Case 7.

*Diagnosis:* Obsessional psychoneurosis.

*Mental Symptoms:* Feels compelled to destroy his wife and children.

Man 47 years of age. He is obsessed with ideas and feelings concerning the destruction of his wife and children. As he expresses it, the ideas and emotions run through his mind continuously and are absolutely beyond his voluntary control. He states that he loves his wife and his children, that there is no reason why he should have such absurd feelings, but that he "simply cannot help it." The thoughts about injuring the members of his family, together with the feelings associated with them, pass through his mind over and over. His obsessions, which developed gradually over a period of several months, are exceedingly annoying; so much so, in fact, that he contemplates suicide on account of mental suffering.

*Comments:* It is interesting to speculate about the cerebral mechanisms involved in the production of obsessions. To me, the most plausible hypothesis is to assume that the inhibitory neurons which normally protect special ideational or emotional centers become paralyzed or, in some instances, are destroyed by organic lesions thus permitting abnormal stimuli to "pour in" and stimulate into abnormal activity the centers for the feelings and ideas of which the patient complains. Such stimulation occurs continuously, compelling the patient to experience the

same abnormal, and often horrible, thoughts and feelings again and again.

#### *Summary and Conclusions*

(1). It is my opinion that neurons receive excitatory impulses through the dendrites farthest away from the axone, and that the impulses received through the dendrites located on the body of the cell near the axone are inhibitory. By means of this mechanism the inhibitory and excitatory impulses pass through the body of the neuron in opposite directions, thus neutralizing and inhibiting the action of each other.

(2). Excitatory and inhibitory neurons may be connected in series. In other words, when a *master* excitatory neuron discharges, it does so into numerous other subsidiary neurons, thus causing *mass action*. Inhibitory neurons also may be connected in *series* and are thus able to coordinate or arrest massive excitatory action. Such a mechanism also explains action in *sequence*. For instance, the activity of one series of neurons sets into motion, at a slightly later time, another series; the action of the latter then sets into motion another, and then still another series. In this way we get the contraction of one part of the stomach or intestines before the contraction of the succeeding parts. The inhibitory neurons when connected in series are able not only to regulate mass action, but also to regulate action in orderly sequence as is seen in peristalsis, in walking, or in the beautifully timed and coordinated movements of a crawling snake. The association of ideas is probably due also to the activity of a series of cortical neurons setting into motion another series, which in turn sets into motion still another, and so on ad infinitum.

(3). Apparently the inhibitory functions of the thalamus normally arrest at the level of the basal ganglia all non-essential stimuli, thus sparing the cortex of the brain from a diffuse excitation.

(4). Hyperactivity of the thalamic inhibitory functions has a tendency to arrest all incoming sensory stimuli at the level of the thalamus, leaving the cortex without external stimulation. The resulting condition is sleep, if the condition is physiologic; coma or unconsciousness, if it is pathologic.

(5). Hyperactivity of particularized inhibitory centers which control and protect special functions of the thalamus may cause either localized or massive anesthetics of various types as is often seen in hysteria.

(6). Hypoactivity of the thalamic inhibitions may allow non-essential stimuli, which normally are arrested in the thalamus, to pass through to the cortex, causing delirium, disorientation and mental confusion.

(7). Hyperactivity of the striatal inhibitory functions may cause extra-pyramidal paralyses of various types and forms.

(8). Hypoactivity of the inhibitions of the striatum may cause contractures, convulsions or even attacks of an idiopathic epilepsy.

(9). A *general* hyperactivity of the cortical inhibitory functions causes the mental reactions to become retarded (bradyphrenia). In fact, the inhibitory functions may restrict all mental processes to such an extent that the patient is unable to think or speak. *Localized* over-action of the cerebral inhibitions causes small dissociations in cortical functions as are seen in the stocking or glove anesthetics, amnesias and repressions.

(10). A *general* hypoactivity or destruction of the cortical inhibitory functions causes tachyphrenia by allowing the stimulus-response impulses to pass through the cortex too swiftly, as is seen in manic states. The paralysis or destruction of *particularized* cortical inhibitions exposes specific cortical centers to vicarious stimulation, thus producing such symptoms as are seen in the obsessions, phobias, tics and compulsions, as well as the innumerable paleophrenic reactions so often observed in mental patients.

In conclusion, I wish to state that the number of sensory, motor and mental symptoms observed in the psychoneuroses and psychoses, which may be explained by overstimulation, paralysis or destruction of the cerebral inhibitory functions, is truly remarkable. It is interesting also to note that the inhibitory functions, like the stimulus-response mechanisms, may be affected psychogenically; that is, by suggestion, emotional shocks, irritating situations, etc., which may "tear through" or "wear out" the protecting inhibitory structures; or by toxins, many



of which, no doubt, have a specific affinity for definite groups of neurons; or by changes in the chemistry of the body; or by destructive or degenerative lesions. It should be remembered, however, that most of the pathological conditions involving the cerebral inhibitions, involve also the excitatory centers, though usually one or the other system is predominantly affected, and this causes an imbalance in cortical and mental functions. It is apparent that for coherent thinking and feeling and for balanced activity of the body and mind, the inhibitory functions are just as essential as are the excitatory. Thalamic and cortical inhibitions are as necessary in preventing a disordered mind characterized by flights of ideas, disordered feelings, obsessions, agitations, etc., as is the vagus center in preventing tachycardia.

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### BIRTH INJURIES IN THE NEWBORN\*

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Hemorrhages in the newborn are the most common serious conditions occurring in the first few days of life. As a general rule the obstetrician will recognize this condition but quite often the general practitioner will not.

Hemorrhages in the newborn are a very common cause of death, and a very large number of backward and mentally defective children have been the victims of a mild hemorrhage at birth, as a rule not recognized because they did not present any alarming symptoms.

We should keep in mind at least three classifications: traumatic hemorrhage; hemorrhage dyscrasias, hemorrhage tendency.

Under traumatic hemorrhage we find as causes, forceps delivery, breech deliveries, ectopic drugs, and abnormal pelvis. Forceps have saved many lives, when properly used,

but when improperly applied will cause trauma and quite often death. Ectopic drugs, especially pituitrin, are responsible for a large number of injuries. One can safely say that forceps would be safer than the use of pituitrin.

Often times the obstetrician is blamed for conditions beyond his skill. I am speaking of the dyscrasias, often times known as hemorrhagic disease or spontaneous hemorrhage. The cause of this is as yet unknown.

As a rule the dyscrasia becomes evident between the second and fifth day.

Hemorrhage tendency should be differentiated from the hemorrhages due to sepsis, syphilis, asphyxia or chloroform.

Birth injuries are described as being solutions of continuity of the infantile body which are due to the action of the mechanical pressure of the act of birth on the fetus. The trauma may originate spontaneously in the genital passage of the mother, or from obstetrical manipulation in artificial deliveries, such as the manual help in breech or transverse presentations, or the application of forceps. In spontaneous delivery it is due either to disproportion between the size of the child and the pelvis of the mother. The injuries affect the external soft parts, the skeleton, or internal organs, and are most frequently found in the region of the head or limbs, rarely affecting the trunk.

Intracranial hemorrhage, as a rule, is due to hard, difficult, and prolonged labor. In a general way, they are more common posteriorly and at the base of the brain. External hemorrhages, that is, outside the dura are seldom found. When found these are usually internal cephalhematoma.

Seitz classifies hemorrhages into four types: (1) Supratentorial, (2) Infratentorial, (3) Combined, (4) Lateral Ventricle. In the supratentorial, bleeding occurs from injury to the veins entering the superior longitudinal sinus, the blood usually flowing over the cerebellum, and the hemorrhage is, as a rule, unilateral. In the infratentorial type, the bleeding is from the region of the transverse sinus or the margin of the tentorium and flows over the cerebellum, around the medulla, and into the spinal canal. In

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the fourth type, the blood enters the lateral ventricles in the region of the straight sinus and of the inferior longitudinal sinus.

As to symptoms to differentiate the four classifications, we find in large extravasations of the infratentorial type a still born infant or one made to breathe after prolonged effort at resuscitation. He may live for a few hours, then, have increased reflexes, twitching, convulsions, stupor and death by respiratory failure. At times convulsions may be absent, death occurring rapidly from respiratory failure. In the supratentorial type, the hemorrhage is often unilateral and the only symptom is twitching of the face, or eyes, or one extremity. No characteristic cardiac symptoms are known. It is most typical in hemorrhage cases that the heart action will continue for some time even though respiratory action has never started.

Extensive literature has accumulated on the causation of intracranial hemorrhages, and it shows a confusion of ideas. Because of the frequent combination with external traumatic lesions, mechanical factors were thought to be the sole cause, but lately studies have shown that extensive intracranial lesions are found in infants that were born after easy and quick labors and even in infants delivered in cesarean section. Because of this, some add as causative factors syphilis, prematurity, asphyxiation and, as stated, hemorrhagic diathesias. Most of us agree that mechanical factors are almost always the immediate and direct cause. Among the immediate causes are those principally due to forceps, or indirectly by forcible traction of the head along protruding portions of a rigid pelvic canal, as the symphysis, promontory or an exostosis. Cerebral congestion is present in all labors, and in a great many is very marked, due largely to asphyxia. Due to the congestion, the intracranial pressure is increased and the thin walled capillaries give way. Some believe that this is the source of the majority of cases.

All cases of cerebral hemorrhage are not caused by rupture of intracranial blood vessels, but may be due to hemorrhagic disease of the newborn. Cerebral hemorrhages in this condition are most apt to occur in the

meninges and ordinarily diffuse in character. These cases are usually associated with bleeding from the mucous membranes of the mouth, the umbilicus, vomiting of blood, tardy stools, or rapidly forming cephalhematoma. There is marked pallor. Jaundice is of no importance. If the hemorrhage is cerebral in type, the infant is distressed, a feeble cry, failure to nurse, and a high temperature. Convulsions are common. Spasticity of the extremities are also found. Cyanosis, as a rule, is extreme. Respiration is variable. It may be very slow or very rapid, there is increased tension of the fontanel. Spinal puncture, as a rule, will disclose a bloody fluid.

There is some difficulty in the early and accurate diagnosis of a intracranial hemorrhage because other conditions closely simulate it especially when associated with convulsions. We will mention a few. (1) Reflex irritability of the brain which is often increased at birth, causing convulsions. (2) Eclampsia Neonatorum, the convulsion of infants born of eclamptic mothers. Toxic substance causing convulsions. (3) Tetany even though some claim that tetany is never observed in the newborn. (4) Tetanus, especially from the umbilical stump as the period of incubation is from two days up to several weeks. (5) Encephalitis. (6) Meningitis which may be intra-uterine or due to an otitis. (7) Acute congenital hydrocephalus.

Spinal puncture is an aid in diagnosis, but is not pathognomonic. It is fraught with evident short-comings and danger. Ascertaining the blood clotting time is important because if we relieve the pressure by spinal puncture and there is a delay in the clotting time, we will cause a continuation of the hemorrhage. Spinal puncture will help in the differential diagnosis. A seemingly increased pressure may depend upon the position of the baby, character of the respiration and certainly is influenced by crying. The presence of blood in the spinal fluid may be due to bleeding from the plexus of veins around the canal which are so numerous in the newborn. But a spinal puncture should be done for two reasons: first, to obtain fluid for cultures or chemical study, and second, to



relieve tension. Blood reaches the spinal canal directly in an infratentorial hemorrhage and indirectly from supratentorial hemorrhage. Spinal fluid strongly mixed with blood or almost clear blood is found in free subtentorial hemorrhages. If the fluid is yellow, an immediate microscopical examination will help in that it will prove an old hemorrhage by the presence of degenerated red blood cells and detritus.

Treatment must be both expectant and symptomatic. All external stimulation, both mechanical and thermal, must be avoided. An ice cap should be applied to the head. Chloral and calcium lactate or chloride should be given. Feeding necessitates great care because of the danger of aspiration. It is best to feed by the rectum or to use nasal feedings. Infants should not be put to the breast until all signs of irritation have subsided. Dehydration must be prevented by hyperdermoclysis. Remember that the bleeding and coagulation time of the blood should always be done, and if prolonged the treatment for hemorrhagic disease of the new born should be instituted.

In cases of hemorrhagic diathesis, the greatest help is found in the use of human blood. At least 20cc of blood should be used, and repeated as often as thought necessary, as a rule twice a day. It is best given deep into the buttocks.

Another common birth injury is cephalohematoma which is caused by a hemorrhage between the periosteum and one of the cranial bones. The swelling is always limited to one bone, usually the parietal. This condition is not present at birth but develops soon after.

It is necessary to differentiate between caput succedaneum, meningocele, lipoma or nevus. Caput succedaneum is an edema of the scalp and is present at birth. It pits on pressure and is not fluctuant nor translucent. Pressure on it does not cause bulging of the fontanel nor cerebral irritation. A meningocele has a smooth surface, symmetrical, pedunculated, fluctuates and is translucent. Pressure on it causes symptoms of cerebral irritation. Fatty tumors and nevi originate outside of the skull.

Hematoma of the sternocleido mastoid

muscle is found quite often. This condition is due to rupture of the blood vessels and muscle fibers as the result of stretching of the neck. The rupture usually occurs at the junction of the middle and lower thirds. As a rule no evidence of the injury may be seen at birth. The blood gradually absorbs, and scar tissue forms at the seat of injury forming a hard lump in the muscle. This is not noticed until a few weeks after birth. At no time is there any discomfort. This condition may be mistaken for an enlarged gland or a sarcoma, but enlarged glands or sarcoma, though they are near a muscle, are not in it.

Fractures of the clavicle are among the relatively frequent birth injuries and are said to occur in 1.5 per cent of all births. This occurs in spontaneous delivery and about twice as often in multipara. Usually the clavicle is broken which presses against the symphysis during delivery. The clinical symptoms are indefinite. At times weakness and pain in the arm are noticed. Frequently it is not diagnosed until an easily palpable callus has been formed.

Facial paralysis is caused by pressure on the trunk of the facial nerve. The baby cannot close the eye on the affected side. The mouth is drawn to the opposite side. Only one other form of facial paralysis may be confused with this condition. That is a lesion of the facial nerve within the skull. If it is central, the upper branch is not involved, therefore the eye may be closed and wrinkle the forehead. Too, if the paralysis is central, there is additional paralysis of one or more extremity.

Obstetrical paralysis, also known as Erb's or Klumpke's paralysis, is due to an injury of the brachial plexus by the separation of the head and shoulders during delivery, this causing stretching of the nerves. We find the upper arm type, the lower arm type, also the combined. The upper arm type is due to injury of the fifth and sixth cervicals, the deltoid, biceps and supinator longus muscles. The arm hangs limp extended at the elbow and the palm turned back. The lower arm type usually affects the triceps. The arm is flexed at the elbow with a flaccid hand, which is extended at the wrist with the fingers flexed. The combined type is a combination

of both types. These types may be confused with paralysis due to an intracranial lesion, but in intracranial lesions there is spasticity with an exaggerated reflex instead of flaccid paralysis. Also, if intracranial, as a rule, it would not be limited to one extremity.

Intense nervous congestion may damage the brain permanently as is often shown by the occurrence of idiocy after severe asphyxia at birth. The regulator of the respiratory movements is located in the medulla oblongata. The activity of this center is believed to be augmented by the venosity of the blood, therefore, all interruptions to placental respiration, as premature separation, or the compression of the cord, or aspiration into the trachea, will be attended with violent motor impulses, first effort to breathe, and later convulsive movements.

Traumatic conditions during birth and asphyxia will cause a condition known as infantile spastic diplegia or Little's disease. This is a spastic paralysis chiefly affecting the lower extremities, the so-called spastic paraplegia. Normal infants have a hypertonic condition of their extremities during the first few months of life. When, however, a stiffness and spasticity exists, so that it is difficult to move the legs passively then we must suspect Little's disease. Associated with the spasticity will be found exaggerated patellar reflexes. The muscular spasm usually prevents the normal sitting and standing position.

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#### THE GEORGIA PEDIATRIC SOCIETY\*

##### *President's Report*

JOSEPH YAMPOLSKY, M.D.  
*Atlanta*

At the beginning of last year I deemed it wise to appoint in every district of the state a physician on whom every committeeman could call upon at any time for information regarding the activities of that work in his part of the state. These gentlemen were appointed from each congressional district and we are glad to say that most of them co-operated in every way possible in getting information for us from time

to time. As time goes on I hope that there will be at least one pediatrician available in every district upon whom we may call to get information of interest to the Georgia Pediatric Society. We have standing committees already appointed and as you have heard the reports we can see that some interesting work was accomplished.

Let me briefly review for you the work of these committees. The Scientific Committee was very fortunate in arranging a scientific program in Atlanta during the month of October, 1933. At this meeting we had outstanding men from all over the country addressing us both in the morning and evening sessions. Several visitors came from neighboring states and the attendance was almost as large as can be found at a meeting of the Medical Association of Georgia. Outstanding on the program was a symposium on "Tuberculosis in Childhood" which was very instructive to all present. This discussion was led by Doctor Casparis of Nashville, assisted by Doctors Kellie Joseph, of Alto, and J. J. Clark, of Atlanta. The other speakers were Doctor Kerley, of New York, and Doctor Arthur Abt, of Chicago. These scientific meetings should continue and should be held annually in Atlanta because it is very easy to get a large audience both of doctors and laymen in a city of its size. Already this program is being planned for next fall and we hope that the scientific committee will be able to get better speakers for next October.

The Post-Graduate Committee has been able to arrange a very instructive program to be held in Atlanta in connection with the Emory clinics on Thursday, June 7th, and Friday, June 8th, when two afternoons will be turned over to the Pediatric Society. Very instructive post-graduate work will be given in the form of lectures and clinics to all those who desire to attend. This committee has great possibilities. Toward the end of this report I will speak of a plan which I hope will be carried out next year. In the meantime let us spread this fact in our communities so that doctors may take this advantage of study in post-graduate work in pediatrics. There is no reason why in time a program similar to that held in Saluda could not be developed in Georgia. Our Society should look forward to bringing a plan of that kind in existence. This may be done later in conjunction with the medical schools of the state of Georgia.

This year we were fortunate through the Committee on Education of Physicians to arrange a paper on pediatrics in every district in the state. There should be no district meeting without a pediatrician represented on the program at least once during the year. This committee can do better work if certain subjects are selected in advance which we wish to bring to the attention of the general practitioner through our pediatricians. By formulating a program of that kind we may be able to have one special subject, such as, tuberculosis in children, brought to the attention of all those attending the district medical society meeting.

Our Committee on Education of Laity consisted of very able men. They accomplished through the press

\*Report to the Georgia Pediatric Society, Augusta, May 9, 1934.



something that we have been trying to put over to the public for a long time. Articles appeared every Sunday in the *Atlanta Constitution* on some subject concerning health problems. These articles were instructive and written with great care. I wish to thank all members of the society who helped make these papers a success. Since these articles were not copyrighted they were published in papers all over the state, and they were read by a great number of people of the state of Georgia. I believe that it is the intention of the Committee to supplement these papers with radio talks next year. They expect to arrange talks so that members of the society over the state may use them in bringing interesting problems before the public.

I am sorry that the Committee on the Study of Infant Mortality could not function this year. This was due primarily to the lack of funds, but I sincerely hope that arrangements may be made whereby this committee can proceed with their work during the coming year.

The Committee on Relations with Child Health Agencies dealt with many matters of importance. It was their desire to study our relations to various public and private child health agencies, the discussion of school health matters, such as school clinics, immunization clinics, pre-school examinations and the question of pay for physicians working in free clinics, and the possibility of working out with health agencies a scale of fees for various immunizations. In this matter we were forced to depend on our district key man for information. We are sorry to say in many ways we were greatly disappointed. It is strange to say that most of our members over the state had very little apparent understanding of what a health center was. Some confused these with immunization clinics and summer round-ups; however, we find that these problems confronted us mainly in two or three large cities of the state. Health centers where advice is not given are not objectionable, although that is not a true situation all over the state. In some parts of the state immunization clinics are only patronized by the poor, where in others whole communities are treated without question of ability to pay. In our big cities health agencies are not working hand in hand with us, and the time is coming when even young men will refuse to give their services to free clinics without pay, and charity will become so burdensome that the profession will revolt against it. It is our duty to attempt to educate those who are connected with child health agencies that the duty of the public health officer is only to educate and not to treat.

Now a word about the Academy of Pediatrics. It should be our purpose to encourage every physician in Georgia who is eligible for membership in the Academy to join as soon as possible. The Academy is the only society which is truly representative of pediatricians of the country. The Georgia Pediatric Society must at present help the Academy as much as possible because the number of members is almost negligible. I have tried to bring forward the Academy as much as possible, and through my office as President of

the Fifth District Medical Society, I was successful in bringing Doctor Clifford Grulee to Atlanta. Doctor Grulee addressed a large luncheon under the sponsorship of the Academy and he also appeared on the scientific program of the Fifth District Medical Society. The members of the Academy in Georgia cannot say that they lacked our co-operation. However, we cannot allow any society to be submerged by another kindred one. In order not to arouse any jealousy it is necessary that full credit at all times be given the Georgia Pediatric Society for her efforts to build up the Academy. I also wish to urge you at this time to avail yourselves of the opportunity as soon as possible for certification by the American Board of Pediatrics. Sooner or later your standing in the profession will be measured by your membership in that organization.

Now as to the future of the Society. We have planned for next year, and we hope that the incoming president will encourage this plan, to continue post-graduate work over the state. This will be done by dividing Georgia into about six districts. A one or two day extension course will be given in each district by designated members of the society in conjunction with obstetricians and dentists. These lectures will be arranged for both the laymen as well as the practitioners, and I believe that they will encourage the study of child health problems more than before. Several standing committees were appointed by me last year. These committees should remain as a unit in order that they should be able to proceed further with the material that they have gathered this year. We must spread our work more into rural districts.

Besides our work on Infant Mortality, Education of Laity, Relation of Child Health Agencies, and post-graduate extension instructions, I recommend the following additions. First, careful study of the number of hospital beds for children and a careful study of the dispensary services in the state. Second, the amount of public instruction in the care of children's teeth. Third, a continuous study of preventive pediatrics and problems of nutrition with special emphasis on rural districts. Fourth, the abuses of free privileges where parents seek services when they are fully able but not willing to pay. Fifth, a fully worked out program of extension instructions for practitioners through demonstrations in different key cities, and the advisability of forming in Atlanta a post-graduate course in pediatrics similar to that of Saluda, N. C. Seventh, a careful choice of key men in many cities in the state on whom we could depend for assistance and information as to conditions in their communities.

In conclusion I wish to thank all the members of the Georgia Pediatric Society who have so nobly co-operated with me in attempting to follow out a pre-arranged program at the beginning of my term. Next year as Chairman of the Scientific Program of the Medical Association of Georgia I hope to be able to select a full pediatric program in order to bring our educational program to a standard which is equaled by none.

# THE JOURNAL

OF THE

MEDICAL ASSOCIATION OF GEORGIA

Devoted to Welfare of Medical Association of Georgia

139 Forrest Avenue, N.E., Atlanta, Ga.

JUNE, 1934

## CHRONIC NASAL SINUSITIS

Chronic nasal sinusitis is often quiescent and must be sought for or many cases will be overlooked. Practically every region of the body may be diseased from this condition and it often happens there are no local symptoms to suggest the condition since all the usual signs may be absent and still virulent infection be present. In no condition is a careful history more essential. Frequent attacks of illness should arouse our suspicion that a focus of infection is present. A septic focus produces definite neurasthenic symptoms in practically all patients. Endocrine gland imbalance, sexual frigidity or changes in the basal metabolism should suggest sinus disease. There is a marked predilection for sinus disease to affect the brain due to its proximity to the sinuses. Ocular complications are also frequent. Infection in the tonsils and adenoids often originates in the sinuses.

In diagnosing sinus disease we should make sure that the patient has no general condition such as diabetes, cancer, lues or a central nerve lesion since the patient's symptoms may be primarily due to his general condition and the sinus condition is only secondary.

After making the usual routine inspection of the nasal passages we may obtain additional information by the use of the endorhinoscope which gives us a clear image of the nasal passages and naso-pharynx. In some cases pus may be seen coming from individual sinuses. X-rays are very helpful in the diagnosis of sinus disease, especially as regards the frontals and maxillary sinuses. They are also of much assistance in ethmoidal and sphenoidal sinusitis but should not be relied upon too much in the latter conditions.

Probably the most reliable procedure for accurate diagnosis is to puncture each sus-



CHAS. H. RICHARDSON, M.D.

Macon

PRESIDENT, 1933-4

pected sinus and extract the contents with a suction syringe and study the contents under the microscope and in the culture tube. This tells you which sinuses are normal or sterile and which are infected with pathogenic organism. It also identifies your pus cells if they are present. This method is indicated with the maxillary antra, the sphenoid sinuses and the posterior ethmoids. Other methods of diagnosis make the procedure unnecessary in the case of the frontal sinuses and anterior ethmoids except in exceptional cases.

Transillumination should be used for confirmatory evidence and should not be relied upon for a positive diagnosis since a sinus may contain pus and still be "negative" by transillumination.

In more than half the cases there is a leukopenia, lymphocytosis and a decrease in the polymorphonuclear cells. Other cases may





CLARENCE L. AYERS, M.D.  
Toccoa  
PRESIDENT, 1934-5



JAMES E. PAULLIN, M.D.  
Atlanta  
PRESIDENT-ELECT, 1934-5

show a leucocytosis and if it persists after the removal of one focus we should search for other foci.

Many cases of chronic sinusitis will recover spontaneously with the aid of simple remedies such as rest, sunshine, suitable diet and general hygiene. In poorly nourished children with sinus disease a proper diet with orange juice is very beneficial. There are other cases which may be cured by simple disinfection of the localized source of infection without operation. While it is true that some cases require a slight operative procedure at the site of the trouble it is only in rare instances that radical operations are indicated. Many cases will clear up after removing some obstruction in the nose such as a deflected nasal septum.

Usually sinusitis fails to undergo spontaneous resolution because there is obstruction to free drainage of the infective discharge and on account of the virulence of the

infection or low tissue defense. Treatment consists of counteracting these two factors.

When indicated, disinfection, drainage and ventilation of an infected sinus give almost as positive results as the removal of an infected tooth. Autogenous and stock vaccines are of doubtful value except where the infected sinus is opened and drained. Vaccines are helpful in overcoming any remaining secondary infection and in rendering the patient less susceptible to subsequent reinfection. Disastrous results may be produced by the use of vaccines when there is a metastatic infection in the eye or myocardium. There have been some favorable results from the use locally of specific antiviral and peptone broth. Non specific protein may be helpful.

Atlanta

M. T. EDGERTON, M.D.

The Medical Association of Georgia will hold its eighty-sixth annual session in Atlanta, May 7, 8, 9, 10, 1935.

GEORGIA DEPARTMENT OF PUBLIC HEALTH

T. F. ABERCROMBIE, M.D., *Director*

SANITATION AND MALARIA  
CONTROL IN GEORGIA

The first medical society in Georgia was founded in 1804 for the purpose of devising means to control malaria and yellow fever. This society urged the city of Savannah to abandon wet rice culture and practice dry rice culture to prevent these diseases, although not knowing that the mosquito was the vector of malaria and yellow fever. In 1817, after a frightful epidemic when one of every fourteen persons died, the city passed this ordinance and in addition instituted drainage which resulted in an improvement in 1818 of one death in sixty-two. This ordinance became ineffective in 1820, drainage was discontinued, and the death rate increased to one in five population. Drainage was reestablished in 1821 and the death rate that year was only one in thirty-seven.

The theory of drainage for the protection of health scored a high mark in medical and sanitary research, although not knowing the relation of the mosquito to disease. Dr. Luther B. Gandy in the history of Medicine and Surgery of Georgia states that due to these diseases from 1808 to 1813 the mortality rate at Milledgeville, the state capital, was at least five per cent of the total population.

A fever epidemic struck the city of Savannah in August, 1854, and two-thirds of the white population left the city. On September 12 of that year fifty-one persons were buried in one day. Reports showed that in three months there were 445 deaths from malaria and 595 from yellow fever. Many other cities of Georgia experienced mosquito borne epidemics throughout the nineteenth century depleting populations, economic loss and retarded industrial progress.

As an illustration of the public health significance of malaria in the history of Georgia, the death rates per 100,000 population are given from 1860 to 1933.

Death Rate Per 100,000 Population	
Year	
1860	53.7
1870	59.5
1880	68.7
1890	51.0
1900	45.8
1920	19.3
1930	15.2
1933	12.1

It is interesting to note that if the same death rate per 100,000 population had pre-

vailed in 1933 as in 1860 there would have been 1,602 deaths from malaria, whereas there were actually only 364. This represents a saving of 1,238 human lives.

The Georgia Legislature created the State Board of Health in 1875. In 1877 the annual appropriation was discontinued and it was not until 1904 that it was reestablished. Active work of the State Board of Health was beginning at a logical time for near the close of the century, in 1897, Sir Ronald Ross proved that malaria was conveyed by the Anopheles mosquito and in 1900 it was proved that the stegomyia mosquito could transmit yellow fever. Yellow fever is now practically extinct throughout the world but malaria is still a serious public health problem.

In 1919 the U. S. Public Health Service in co-operation with the State Board of Health made a malaria survey in one South Georgia county and found approximately 82 per cent of the population infected with malaria.

It was not until 1923 that the State Board of Health with the division of sanitary engineering initiating malaria control was enabled to begin active drainage for malaria prevention and then only on a small scale and in only a few sections of the state. Without paved highways and automobile transportation, contact of only the towns by train was possible, consequently all activities for the first few years was devoted to malaria control in towns and cities. In a period of about five years very satisfactory progress had been made in elimination of malaria in and adjacent to municipalities, leaving the problem chiefly rural.

During 1928 and 1929 the state experienced two successive years of unprecedented rainfall accompanied by an alarming increase of malaria. The rural people appealed to the State Board of Health for assistance. Advisory and technical service was offered but the counties had no financial resources for drainage. A plan was then devised by the State Board of Health to furnish drainage surveys if the counties would use convicts for drainage construction. This necessitated constant field contact, educational campaigns and meetings with county officials. The first county co-operated in 1929. Other counties followed offering convicts for drainage and in 1930 it became necessary to employ a sanitary engineer for making drain-



age surveys. The plan became so popular that in 1931 it was necessary to add the second engineer. At the end of 1932 there were 41 counties using convicts for malaria drainage. During the two years 1931 and 1932 there were drained 760 ponds, comprising 13,937 acres. Thus the convict was paying his debt to society in a commendable manner by relieving sickness and distress.

The next year, 1933, furnished material for a chapter outlining an amazing accomplishment in public health, public welfare, and economic rehabilitation. For those who were physically sick, mentally and financially depressed, a new day was dawning. The spade was destined to become mightier than the pen or the sword, and the ditch the channel to convey to the destitute the products of the "New Deal". The Federal Emergency Relief Administration structure was rising from the ashes of the economic depression. Work was to be provided in Georgia not for hundreds but for thousands. The privilege of doing an honest day's work and the right to earn wages was reestablished. In Georgia alone 31,000 men were given the spade and paid for an honest day's work for digging ditches to eradicate the mosquito which was adding misery to those already sick and destitute.

To those in executive authority with the F. E. R. A. too much credit cannot be given for realizing that a type of work must be provided affording the greatest social benefit. They had a clear conception that sickness plus poverty is the worst form of destitution. Those interested in public welfare allied with those interested in public health in a concerted effort to drive through the lines of poverty and sickness.

The citizens of a great state who had long suffered from the ravages of the mosquito, even before the economic depression, rallied to those who could offer relief and begged for the dual benefits to be derived from drainage. County officials proved that they realized the great economic loss due to malaria.

To those who think clearly and act quickly belong the credit for wisdom in making provision for technical personnel for planning and executing work projects of such great social benefit. In selection and execution of such projects to prevent malaria, responsibility was assumed by federal, state, division, district and county technical personnel. Success was assured.

Even though the history of typhoid fever, dysentery and hook-worm infection in Georgia is not as spectacular as that of malaria, all of these diseases are unduly prevalent and

methods of control are of the greatest sanitary importance. History could be written of great epidemics of typhoid fever and dysentery causing mental anguish and great economic loss. Cases could be cited of finding nearly one hundred per cent hookworm infection in some of our schools before sanitary conditions were improved. Pathetic illustrations of hookworm infection could now be exhibited.

Upon inauguration of emergency unemployment relief the saw and hammer was to typhoid and hookworm as the pick and shovel was to malaria. Sanitary engineers invaded the cities, towns and rural communities preaching the gospel of health protection by sanitation. Such proselyting was no mean task, especially among those who had no conception of such methods of sanitation. Then also, unlike the drainage program, there was involved considerable expense on the part of municipalities and individuals in the cost of material for sanitary privy structures. It is very commendable that in a period of about four months there was an approximate maximum daily number of 1,900 persons given employment on this type of work. Projects were prepared calling for about 17,000 sanitary privies. Approximately 8,500 were constructed during the short period of the Civil Works Administration. The result of this work in addition to aiding unemployment is bound to reflect in fewer cases of typhoid, dysentery and hookworm.

Development of sanitation in Georgia under the Civil Works Administration simultaneously furnishing work for the unemployed has gone far toward the goal of health, happiness and prosperity.

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#### THE TEACHING OF PHYSICAL THERAPY TO UNDERGRADUATE MEDICAL STUDENTS

In their article on the teaching of physical therapy to undergraduate medical students, Irving S. Cutter and John S. Coulter, Chicago (*Journal A. M. A.*, June 2, 1934), state in part that there is a growing consciousness on the part of the medical profession of the great value of the numerous procedures known as physical therapy. Realization of this has been aided by the establishment of the Council on Physical Therapy of the American Medical Association, and its publication of conservative articles on this subject, which have recently been collected in the *Handbook of Physical Therapy*. The present generation has witnessed an abrupt swing from physiologic principles. The coming generation will witness a swing away from the use of elaborate machines in physical therapy to the use of simple agents applied by physicians with a knowledge of their physiologic action, the pharmacology of physical therapy. The value of physical therapy is evidenced in the reports of its use in all branches of medicine.

## WOMAN'S AUXILIARY OFFICERS

President—Mrs. J. E. Penland, Waycross.

President-Elect—Mrs. E. R. Harris, Winder.

First Vice-President—Mrs. Ralph H. Chaney, Augusta.

Second Vice-President—Mrs. J. M. Barnett, Albany.

Third Vice-President—Mrs. G. Hugo Johnson, Savannah.

Recording Secretary—Mrs. Warren A. Coleman, Eastman.

Corresponding Secretary—Mrs. B. H. Minchew, Waycross.

Treasurer—Mrs. Chas. H. Richardson, Macon.

Parliamentarian—Mrs. Mather M. McCord, Rome.

Historian—Mrs. M. F. Haygood, Alto.

Chairman Public Relations—Mrs. Evert A. Bancker, Jr., Atlanta.

Chairman Press and Publicity—Mrs. J. Bonar White, Atlanta.

Chairman Legislation—Mrs. Dan Y. Sage, Atlanta.

### BARROW COUNTY AUXILIARY MEETING

March 30, 1934

Mrs. C. B. Almond introduced before the Barrow County Auxiliary the following resolution which was adopted: Whereas, the Auxiliary to the Barrow County Medical Society wishes to pay lasting tribute to her Doctors, therefore, be it,

Resolved by the Auxiliary to the Barrow County Medical Society, that March 30th, the day that famous Georgian, Dr. Crawford W. Long, first used ether anesthesia in surgery, be adopted as Doctor's Day, the object to be the well being and honor of the profession, its observance demanding some act of kindness, gift or tribute in remembrance of the doctors.

Twelve cards were sent to former Barrow County doctors who reside in six different cities.

Eighteen graves of Barrow county doctors were cleaned and decorated.

The Auxiliary further observed the day by entertaining the members of the Barrow County Medical Society with a four course dinner at the home of Dr. and Mrs. Randolph. The home was artistically decorated with spring flowers.

Covers were placed for Dr. and Mrs. Adams, Dr. and Mrs. Almond, Dr. and Mrs. Harris, Dr. and Mrs. Mathews, Dr. and Mrs. Randolph, Dr. and Mrs. Ross, and Dr. and Mrs. Stinchcomb.

Games were enjoyed during the evening.

Mrs. E. R. Harris gave a tribute to the doctors.—(See April JOURNAL.)

Dr. C. B. Almond responded with the following: It is true that men love praise and it is true that He, who made the soul, planned therein, the love of praise and we are like all others, we love to be loved. We deeply appreciate the honor bestowed upon us but the honor should include our wives. You have made our lives fuller and richer. 'Tis you who are left at home, waiting, listening, looking, keeping the home fires burning, praying that we may be directed in ministering to diseases of mankind. God said in Genesis, 2nd Chapter, 18th verse, man shall not live alone. He knew that we would need some one to welcome us with a broad smile and a cheery hello, some one to tell us that our profession is the greatest in the

world and a real pal to urge us on. You have proven to be the most inspirational, loyal group of wives in the whole world. Our hats are off to you!

In thanking Dr. and Mrs. Randolph in behalf of the Auxiliary, Mrs. C. B. Almond said: We thank you for your generous, gracious hospitality. It has been a real pleasure to have observed our first Barrow County Doctor's Day in your beautiful home and we know your children, grandchildren, and your great, great grand children will be proud of the fact that the First Doctors' Day ever observed was celebrated in grandfather and grandmother Randolph's home in Winder, Georgia.

Dr. and Mrs. Ross extended a most cordial invitation for the Day to be celebrated in their home next year.

### JACKSON COUNTY-HOSCHTON MEETING

Mrs. Ralph Freeman, of Hoschton, was hostess to the Auxiliary to the Jackson County Medical Society, March 28, 1934.

The meeting was opened with prayer by the President, Mrs. C. B. Lord.

Mrs. S. A. Boland, Secretary-Treasurer, made her report and the Auxiliary voted to send \$5.00 to the Students' Educational Fund.

Mrs. M. B. Allen, Historian, read history of the Auxiliary and reported the scrap book up to date.

Mrs. Ralph Freeman reported two health programs had been co-sponsored by the Woman's Clubs and the Auxiliary, one with Jefferson Woman's Club, with Mrs. Ralph Freeman presenting Public Health, and Mrs. M. B. Allen presenting Mothercraft.

The Hoschton Woman's Club co-sponsored with the Auxiliary a program with Mrs. J. Bonar White, President of the Woman's Auxiliary, making an address on *The History of Medicine as Related to Motherhood*. This program was attended by the Braselton Club as visitors. Preceding this meeting Mrs. Ralph Freeman entertained at dinner Mrs. Bonar White, Mrs. Olin Cofer, Mrs. M. B. Allen, and Mrs. L. C. Allen.

Four members of the Auxiliary attended the Ninth District Medical meeting at Alto Sanatorium.

A copy of the Constitution and By-Laws of the



local society was sent to be filed in the State Archives.

A report of the activities for the past six months has been sent to the state officers.

Mrs. C. B. Lord and Mrs. L. C. Allen were elected delegates to the state meeting in Augusta.

The following officers were elected:

President—Mrs. C. B. Lord, Jefferson.

Secretary-Treasurer—Mrs. S. A. Boland, Jefferson.

Historian—Mrs. M. B. Allen, Hoschton.

During the social hour the hostess served a delicious salad course.

MRS. M. B. ALLEN,

*Reporter for Jackson County Auxiliary.*

#### FULTON COUNTY HEALTH PROGRAM

To stimulate the summer round-up, a health program was held at the Academy of Medicine in April for health chairmen of elementary and pre-school associations of the Atlanta Council of Parents and Teachers, the DeKalb and Fulton County Councils.

The meeting was called to order by Mrs. Bonar White, who introduced Dr. M. C. Pruitt, President of the Fulton County Medical Society. Dr. Pruitt welcomed the audience and commended the health education work being sought by the women. Mrs. White then introduced Dr. Hal M. Davison, Chairman of the Committee on Public Policy and Legislation of the Society, who had secured the speakers. Dr. Davison introduced the following in turn, occasionally adding a pertinent remark.

Dr. Wm. L. Funkhouser, *Immunization, Why Necessary and Protection Given.*

Dr. Lawson Thornton, *Posture; Defects and Corrections.*

Dr. L. Minor Blackford, *The Heart; Damages Through Disease; Avoidance.*

Dr. Holmes, *Childhood Tuberculosis.*

Dr. L. D. Hoppe, *Control of Communicable Diseases in the Home and School.*

Dr. Howard Hailey, *Common Skin Diseases of Children.*

Dr. Jack W. Jackson, *Sight Conservation.*

Dr. Roger W. Dixon, *Why Remediable Defects Should be Found Early and Corrected.*

Educational material, including posters, brief talks, A. M. A. Auxiliary study envelopes were distributed after the meeting.

This was an intensely interesting meeting and many asked questions. The Auxiliary feels deeply indebted to the members of the Fulton County Medical Society who made this program possible.

#### CHATHAM COUNTY

At our annual meeting held January 5th, we had the yearly report of the various officers and chairman.

Mrs. Elliott Wilson, Chairman of Christmas Card Sales, reported a profit of \$40.60.

Membership Chairman, Mrs. Charles Usher, reported two new members.

Mrs. G. Hugo Johnson told of donations made by the Auxiliary at Sunshine Unit Pantry Shower.

Chairman of the Committee on Public Policy and Legislation reported 735 papers on Health Education distributed and two meetings of health centers attended.

Mrs. Lee Howard read a paper on Social Hygiene.

Meeting of Health Center attended.

Report of Nominating Committee with Mrs. Hugo Johnson as new President.

At our April meeting delegates were appointed to the State Convention in May.

The Auxiliary put on a Health Program at the Huntington Club.

A meeting of the Health Center was attended and sheets bought for children's beds at Sunshine Unit.

A motion was made to contribute \$5.00 to Health Films, and plans made to show films at three schools.

Ten members were appointed to sell seals for Tag Day for T. B. Association.

MRS. E. C. DEMMOND,

Savannah, Ga.

*Recording Secretary.*

#### BOOKS RECEIVED

*Infections of the Hand.* A Guide to the Surgical Treatment of Acute and Chronic Suppurative Processes in the Fingers, Hand and Forearm by Allen B. Kanavel, M.D., Professor of Surgery, Northwestern University Medical School, Chicago; Attending Surgeon, Wesley Memorial and Passavant Memorial Hospitals, Chicago. Sixth Edition—thoroughly revised. Illustrated with 216 engravings. Contains 552 pages. Publishers: Lea & Febiger, Washington Square, Philadelphia. Price \$6.00.

*A Practical Treatise on Diseases of the Skin* for the use of Students and Practitioners by Oliver S. Ormsley, M.D., Clinical Professor and Chairman of the Department of Dermatology, Rush Medical College of the University of Chicago; Dermatologist to the Presbyterian and Saint Anthony's Hospitals, and the Home for Destitute Crippled Children; Consulting Dermatologist to the Orphan Asylum of the City of Chicago; Member of the American Dermatological Association; Corresponding member of the Section of Dermatology of the Royal Society of Medicine, London. With Revision of the Histopathology in this Edition by Clark Wylie Finnerud, M.D., Assistant Clinical Professor of Dermatology, Rush Medical College of the University of Chicago; Assistant Attending Dermatologist to the Presbyterian Hospital of Chicago. Fourth Edition Revised. Illustrated with 619 Engravings and 3 colored plates. Contains 1288 pages. Publishers: Lea & Febiger, Washington Square, Philadelphia. Price \$11.50.

*Modern Drug Encyclopedia and Therapeutic Guide.* A presentation of 8160 modern, non-pharmacoepal, medical preparations; 1878 drugs and chemicals, 535 biologicals, 860 endocrines, 1563 ampule medicaments, 209 medical foods, 129 mineral waters, 2344 individ-

ual and group allergens and 642 miscellaneous products by Jacob Gutman, M.D., Consulting Physician, Manhattan General Hospital, New York; The Riverdale, Shore Road, Williamsburg Maternity and Borough Park General Hospitals of Brooklyn. For the use of dentists, pharmacists, physicians, and medical students. Contains 1393 pages. Publishers: Paul B. Hoeber, Inc., 76 Fifth Avenue, New York City. Price \$7.50.

*I Know Just the Thing for That*, by J. F. Montague, M.D., Medical Director, New York Intestinal Sanitarium; American Association for the Advancement of Science; American Society for the Control of Cancer; Late of University and Bellevue Hospital Medical College; Fellow of the American Medical Association. Contains 265 pages. Publishers: The John Day Company, 386 Fourth Avenue, New York City.

*Obstetric Medicine—The Diagnosis and Management of the Commoner Diseases in Relation to Pregnancy*. Edited by Fred L. Adair, M.D., Mary Campau Ryerson, Professor of Obstetrics and Gynecology; Chairman Department of Obstetrics and Gynecology, University of Chicago; Chief of Service, Chicago Lying-in Hospital; and Edward J. Stieglitz, M.D., Assistant Clinical Professor of Medicine, Rush Medical College of the University of Chicago; Assistant Attending Physician, Presbyterian Hospital; Attending Physician, Chicago Memorial Hospital; Formerly Attending Internist to the Chicago Lying-In Hospital. Contains 743 pages. Illustrated. Publishers: Lea & Febiger, Washington Square, Philadelphia. Price \$8.00.

#### COMMUNICATIONS CANCER MORTALITY

To the Editor:

New York, N. Y., May 26, 1934.—Decrying the difficulty of obtaining accurate information respecting cancer mortality due to the fact, among others, that in a number of states the disease is not reportable by law, Dr. Louis I. Dublin, Third Vice-President and Statistician of the Metropolitan Life Insurance Company, today (May 25) urged cancer specialists and the entire medical profession to co-operate with vital statisticians in an effort to secure more reliable data along these lines.

Delivering an address on the "Incidence of Gastric Cancers" before the Symposium on Carcinoma of the Stomach, at the 50th anniversary of Memorial Hospital, Dr. Dublin presented statistics and facts pertaining to cancer of the stomach based upon the experience of his company's industrial policyholders. He concluded that, in the United States, the stomach is the principal site of fatal cancer among white males and also very probably among white females as well; that the incidence of gastric cancer is approximately 50 per cent greater among white males than among white females; and that among white females, the death rate from gastric cancer and, by inference, the incidence of gastric cancer, appears to be decreasing at a rate greater than can be attributed to chance alone. "Among

males," Dr. Dublin said, "the death rate has shown a slight tendency to increase but this is statistically significant only at the older ages of life."

Dr. Dublin said that "possibly as many as one-third of the deaths actually due to cancer of the stomach are described to other causes."

Pointing out that in 1932 a total of 27,000 deaths from gastric cancer were reported for the population of the United States, Dr. Dublin declared that due to inaccuracies in diagnosis and failure to report cases, "it is my judgment that instead of 27,000, the annual number of deaths from cancer of the stomach and duodenum in the country at large is now more likely to be close to 40,000, or about as many as from broncho pneumonia, or coronary disease, including angina pectoris."

The statistical picture, however, Dr. Dublin declared, is improving.

Utilizing the extensive experience of the Industrial policyholders of his company, numbering many millions of individuals, Dr. Dublin said:

"I give you these figures for the insured with the very strong conviction that they show us essentially what has been happening in this disease in the general population of the country as well.

"There was a total of 40,573 deaths from gastric cancer among these insured lives in the years 1917 to 1933 inclusive. These occurred among an annual average of fifteen million policyholders over this period. The average annual crude death rate was, therefore, 15.5 per 100,000 exposed. The gastric cancers constituted 20.8 per cent of all cancer deaths, the figures being much higher among the males than among the females."

Dr. Dublin explained that, as true for the disease in general, deaths from gastric cancer are largely concentrated in the later ages of life. "There are few deaths under 25," he said. "At ages 25 to 34, the rates are still low—averaging less than two per 100,000 per annum. It is only after age 35 that the death rate from this disease has any real meaning. At 45 to 54 years, the rates are already fairly high.

"Among white males, the average death rate in this age group over this entire period of seventeen years was 46.7 per 100,000, as contrasted with 30.6 per hundred thousand among white females. The death rate almost trebles in the next age period. Among white males, it is 132.7 per 100,000; among white females, 85.2 per 100,000. In the next age period, that is, 65 to 74, the rate almost doubles among white males and more than doubles among white females. The interesting points in figures are first, that the rates rise with advancing age and, second, that they are much higher among the males than among the females, being, in fact, from a third to a half higher in the white race."

"In closing," Dr. Dublin said, "may I take advantage of this opportunity to urge that the leaders in the cancer field, and through them the medical profession generally, co-operate with vital statisticians in their efforts to improve the accuracy of the diag-



noses entered on certificates of death. Only in this way will the statisticians be assured that their material is worthy of statistical analysis."—Metropolitan Information Service.

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Department of Commerce, Bureau of the Census  
Washington

To the Editor:

Beginning immediately and running until June 30, 1934, the Bureau of the Census is putting on a mammoth "Register Your Baby" campaign in Georgia, as a memorial to the late Senator William J. Harris, a former director of the Bureau of the Census and the father of vital statistics in Georgia.

Briefly, the plan of operation is this: Georgia is to be flooded with cards, a sample of which is enclosed. There will be one to every family in the state. Those families in which births have occurred in the last 12 months are requested to fill in the data called for in the card and drop the card in the mail. No postage is required for the card. When the cards are received by the Georgia State Board of Health, they will be checked against birth registration records, and if the birth is registered, the parents will be presented with a souvenir certificate. If it is not registered, proper steps will be taken to obtain the registration.

Your co-operation to the extent of asking those families with which you come in contact to fill out and mail cards, is earnestly requested. No obligation to anyone is involved in filling out and mailing the card, but inestimable value will accrue to the State Board of Health and the Bureau of the Census in your activity along the plan outlined.

T. F. ABERCROMBIE, M.D.,

Special Agent, Bureau of the Census.

State Capitol, Atlanta, Ga.

May 21, 1934.

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#### SYMPOSIUM ON UROLOGY

To the Editor:

I want to thank you for the wonderful way you placed and had published in *The Journal of the Medical Association of Georgia* the papers read at the meeting of our urological association in Savannah, Georgia, last fall.

You could not have done it in a manner more satisfactory to our members and I want you to know that we are very appreciative.

May 30, 1934, Atlanta. W. B. EMERY, M.D.

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#### JACKSON-BARROW COUNTIES MEDICAL SOCIETY MEETING

The Society met at the Allen Clinic and Hospital, Hoschton, on May 7th.

Dr. Myron B. Allen talked on Septicemia, and presented a patient who had recovered from this dreaded disease. He made his talk more interesting by the use of a graphic chart illustrating the patient's temperature, pulse, respiration and the effects of the drugs, sera, blood transfusions, oxygen, etc., during his illness which lasted some three months. The subject was

fully discussed by the members and enjoyed by all present.

Preceding the program Dr. and Mrs. Myron Allen entertained the doctors and their wives and several friends at a barbecue dinner in the yard of their home. Those enjoying this hospitality were as follows: Dr. and Mrs. S. T. Ross, Dr. Almand and Dr. Mathis, of Winder; Dr. and Mrs. C. B. Lord, of Jefferson; Drs. Hubbard, Rogers, Saunders, and Misses Mary Ruth Saunders, of Commerce; Dr. and Mrs. Walter Lott, of Monroe; Dr. and Mrs. Lloyd Lott, Dr. and Mrs. Ralph Freeman, Dr. L. C. Allen, Misses Charlotte Stewart, Myrtice, Virginia, Alberta and Lucy Allen, Mr. Sutton, Mr. Getzen, Mr. Dean Lott, Miss Jurelle Gilmore, Mr. Lee Ritchie, of Hoschton; the nurses from the hospital, Misses Susie Tanner, Madge Mauldin and Mildred Dalton and Mrs. T. L. Adderholdt; Mr. and Mrs. Alfred Simpson and Mr. and Mrs. Tom Burton, of Toccoa; Mr. and Mrs. S. H. Allen and Misses Imogene and Mary Allen, of Decatur; Drs. Ralph McCord and Frank Justice, of Emory University; Mr. and Mrs. W. H. Braselton, Mr. and Mrs. W. N. Braselton, of Braselton.

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#### NEWS ITEMS

The Georgia Medical Society met on May 22. Dr. J. L. Elliott, Savannah, read a paper entitled, *Pneumothorax*; discussion was led by Dr. M. F. Haygood, Alto, and Dr. J. C. Metts, Savannah. Dr. St. Julian deCaradeuc, Savannah, reported, *Two Unusual Eye Cases*.

The regular staff meeting of Grady Hospital, Atlanta, was held on May 22. The program consisted of business, committee and morbidity reports. Case Presentation for Diagnosis by Dr. E. Van Buren. General Sarcomatosis by Dr. H. R. Donaldson, two cases reported by Dr. T. I. Willingham. Presentation of Gavel by Dr. Frank K. Boland. Colon Cancer by Dr. Geo. Fuller. Case presented for diagnosis by Dr. W. P. Sloan. Refreshments were served.

The New York Polyclinic Medical School and Hospital, 341-353 West Fifth Street, New York City, announces the appointment of Dr. J. Eastman Sheehan, Professor of Plastic Reparative Surgery and the establishment of a department for post-graduate teaching in this subject; Dr. Sidney V. Haas appointed Professor of Pediatrics; Dr. James P. Croce, Clinical Professor of Internal Medicine.

Dr. Edgar Boling announces the removal of his office to 322 Doctors Building, 478 Peachtree Street, Atlanta.

Dr. T. C. Davison, Atlanta, has been appointed on the staff of the Reserve Officers Association of Georgia and was elected surgeon of the Georgia Department of the Association at Griffin on May 12.

The regular monthly meeting of the staff of Wesley

Memorial Hospital at Emory University was held on May 18. During the month there were 315 patients admitted and the patient days were 3,006. The program consisted of "Presentation of Portrait of Dr. Willis Westmoreland" by Dr. J. L. Campbell, Atlanta. Dr. F. M. Atkins, Atlanta, discussed, *Malignant Hypertension* and *Chronic Nephritis with Uremia*. Dr. Stewart R. Roberts, Atlanta, *Adenoma Pituitary Gland*. Dr. Jas. J. Clark, Atlanta, *X-Ray Work*.

The Dooly County Medical Society met at the home of Dr. V. L. Harris, Pinehurst, on May 9. Refreshments were served. The next meeting will be held at the office of Dr. M. L. Malloy, Vienna.

The Crisp County Medical Society met at Cordele on May 17. Dr. Calvin Stewart, Atlanta, spoke on, *A Review of the Disease of Cancer*; Dr. R. Hugh Wood, Atlanta, discussed, *Glandular Fever*. Supper was served at the Rosamond Cafe.

Dr. and Mrs. L. G. Neal, Cleveland, entertained the members of the Hall County Medical Society at dinner in their home on May 16. Dr. Pratt Cheek, Gainesville, was a speaker on the scientific program.

Dr. P. C. Quarterman and Dr. E. F. Thompson, Valdosta, entertained the members of the Lowndes County Medical Society at dinner at Ocean Pond on May 15. Members of other societies present were: Drs. Roy A. Hill and Chas. K. Wall, Thomasville; Drs. A. B. Jones and J. R. McMichael, Quitman.

Dr. O. H. Cheek, Dublin, Laurens County Commissioner of Health, assisted by two field nurses and one laboratory technician, recently completed a hookworm survey of white children in the public schools of the county. Out of 4, 016 children examined 2,396 were given treatment. Examination two to three weeks later showed excellent results, except, in severe infections second treatments were necessary. With the assistance of the CWA and the Federal Emergency Relief Administration in cooperation with the parents and teachers, the work was pleasant and successful.

The annual conference to the State and Territorial Health Officers with the U. S. P. H. S. was held at Washington, D. C., June 5, 6, 7, 8. Dr. T. F. Abercrombie, Atlanta, Commissioner of Health, Department of Public Health, represented Georgia.

The Randolph County Medical Society met at the Patterson Hospital, Cuthbert, on June 7th. Dr. F. S. Rogers, Coleman, read a paper entitled, *Cardiac Conditions Associated with Pain*.

The Georgia Medical Society met on May 22. Dr. J. L. Elliott, Savannah, spoke on the latest developments in the *Treatment of Tuberculosis by Pneumothorax*; the discussion was led by Dr. M. F. Hay-

good, Alto, and Dr. J. C. Metts, Savannah. Dr. St. Julian deCaradeuc, Savannah, gave two case reports, *Unusual Eye Conditions*. Refreshments were served.

The Spalding County Medical Society met at the R. F. Strickland & Son Memorial Hospital, Griffin, on May 15. Dr. Marvin M. Head, Zebulon, was the principal speaker and made a report on the proceedings of the Augusta meeting of the Association, held May 8-11.

The Fulton County Medical Society met on June 17. Dr. Eustace A. Allen, Atlanta, gave a case report entitled, *Pulmonary Tuberculosis with Complications*; Dr. O. H. Matthews, Atlanta, made a clinical talk on, *The Diseased Cervix*; Dr. Geo. L. Walker, Atlanta, read a paper entitled, *The Measurement of the Work of the Heart and Its Relation to Disease*. The discussions were led by Dr. Stewart R. Roberts, Dr. Carter Smith and Dr. J. L. Richardson, all of Atlanta.

The Jackson-Barrow Counties Medical Society met at the Harrison House, Jefferson, on June 4. Dr. S. A. Boland, Jefferson, read a paper entitled, *Rheumatism in Children*.

A special meeting of the Fulton County Medical Society was held on May 31 at the Academy of Medicine, Atlanta. Dr. Geo. H. Semkin, New York City, spoke on *A Survey of the Cancer Problem*.

The regular staff meeting of St. Joseph Infirmary, Atlanta, was held on May 29. Dinner was served.

The regular staff meeting of the Atlanta Tuberculosis Association was held at the Community Room, 282 Forest Avenue, Atlanta, on May 24. Dr. A. Worth Hobby, Atlanta, read a paper entitled, *Gastro-Intestinal Complications in Pulmonary Tuberculosis*; the discussion was led by Dr. L. P. Parham, Atlanta. Dr. Geo. F. Klugh, Atlanta, Chairman of the Medical Staff, announced that no other meetings would be held during the summer and until September 27.

The Georgia Medical Society, Savannah, met on June 12th. The program consisted of a paper by Dr. S. P. Sanford, Savannah, U. S. P. H. S., entitled, *Hookworm Infection*; case report by Dr. C. Y. Bailey, U. S. P. H. S., entitled, *Fungus Infection of the Lung*; case report by Dr. L. J. Zbranek, U. S. P. H. S., entitled, *Carbon Tetrachloride Poisoning*. Refreshments were served.

Dr. Kenneth Hunt, Griffin, and Dr. George Walker, Atlanta, will be associated in the practice of medicine at Griffin.

Dr. T. F. Abercrombie, Atlanta, was elected President of the American Public Health Association at Washington, D. C., on June 8.

Dr. Dunbar Roy, Atlanta, has been elected President of the American Laryngological Association.



# MEMBERS REGISTERED AT THE EIGHTY-FIFTH ANNUAL SESSION OF THE ASSOCIATION, AUGUSTA, MAY 8, 9, 10, 11, 1934.

## A

Abercrombie, T. F., Atlanta  
 Abram, L. E., Fitzgerald  
 Adams, E. G., Greensboro  
 Adams, R. P., Winder  
 Adams, Thos. M., Montezuma  
 Adkins, H. T., Vienna  
 Aiken, W. W., Lyons  
 Akerman, Joseph, Augusta  
 Alden, Herbert, Atlanta  
 Aldrich, F. N., Brunswick  
 Allen, Edwin W., Milledgeville  
 Allen, Eustace, Atlanta  
 Allen, L. C., Hoschton  
 Allison, Gordon G., Atlanta  
 Anderson, Carl L., Macon  
 Anderson, J. T., Augusta  
 Anderson, Wm. Willis, Atlanta  
 Ansley, H. G., Decatur  
 Applewhite, J. D., Macon  
 Askew, H. H., Atlanta  
 Askew, P. H., Nashville  
 Atkinson, H. C., Macon  
 Aven, C. C., Atlanta  
 Ayers, A. J., Atlanta  
 Ayers, C. L., Toccoa

## B

Baggett, L. G., Atlanta  
 Bailey, D. V., Elberton  
 Baker, W. Pope, Atlanta  
 Barber, W. E., Atlanta  
 Barge, A. A., Newnan  
 Barrow, Craig, Savannah  
 Barton, Jno. J., Dublin  
 Barton, W. L., Augusta  
 Bashinski, Benj., Macon  
 Bateman, Needham B., Atlanta  
 Battey, Colden R., Augusta  
 Battey, W. W., Augusta  
 Beasley, B. T., Atlanta  
 Bedingfield, W. R., Augusta  
 Bell, Kenneth R., Atlanta  
 Benson, Marion T., Atlanta  
 Bernard, G. T., Augusta  
 Billingshurst, G. A., Augusta  
 Binion, Richard, Milledgeville  
 Bird, Frank, Valdosta  
 Bivings, Lee, Atlanta  
 Blackford, L. M., Atlanta  
 Blanchard, P. G., Appling  
 Boland, Frank K., Atlanta  
 Bond, D. T., Augusta  
 Bowcock, Harold, Atlanta  
 Bowdoin, C. W., Augusta  
 Boyd, Montague, Atlanta  
 Boyette, L. S., Augusta  
 Boynton, Chas. E., Atlanta  
 Bradley, D. M., Waycross  
 Brannen, C. C., Moultrie

Brawner, Jas. N., Atlanta  
 Bray, H. B., Wrightsville  
 Bridges, R. R., Leary  
 Brooke, Geo. C., Canton  
 Brooks, Henry W., Buena Vista  
 Broderick, Reid, Savannah  
 Brown, Stephen T., Atlanta  
 Brown, Thos. P., Augusta  
 Bryant, C. H., Comer  
 Bunce, Allen H., Atlanta  
 Burdett, J. R., Tennille  
 Burford, R. S., Brunswick  
 Burpee, C. M., Augusta  
 Bussell, B. R., Waycross  
 Butler, C. G., Gainesville  
 Butler, J. H., Augusta  
 Butner, J. H., Atlanta  
 Byne, J. M., Jr., Waynesboro  
 Byne, J. M., Sr., Waynesboro

## C

Calhoun, F. Phinizy, Atlanta  
 Callison, H. G., Augusta  
 Camp, M. N., Augusta  
 Campbell, J. L., Atlanta  
 Carpenter, Geo. L., Wrens  
 Cason, W. M., Sandersville  
 Champion, W. L., Atlanta  
 Chandler, J. H., Swainsboro  
 Chanel, Ralph H., Augusta  
 Charlton, Thos. J., Savannah  
 Cheek, Pratt, Gainesville  
 Cheek, O. H., Dublin  
 Childs, J. R., Atlanta  
 Chisholm, Julian F., Jr., Savannah  
 Chrisman, W. W., Macon  
 Churchill, C. W., Thomson  
 Clark, Jas. J., Atlanta  
 Clark, T. H., Douglas  
 Clay, Grady E., Atlanta  
 Clifton, Ben H., Atlanta  
 Coker, Grady N., Canton  
 Coleman, Warren A., Eastman  
 Coleman, Y. R., Macon  
 Collier, T. W., Atlanta  
 Collins, B. E., Augusta  
 Collum, O. F., McRae  
 Cone, R. L., Statesboro  
 Cook, W. S., Albany  
 Coppedge, W. W., Augusta  
 Corbitt, Melvis O., Augusta  
 Corn, Ernest, Macon  
 Crane, Chas. W., Augusta  
 Cranston, W. J., Augusta  
 Crawford, H. C., Atlanta  
 Crawford, J. H., Atlanta  
 Crawford, J. M., Augusta  
 Crichton, Robt. B., Augusta

## D

Dabney, W. C., Atlanta

Dancy, Wm. R., Savannah  
 Darden, Horace, Sparta  
 Davis, A. W., Warenton  
 Davis, B. B., Gainesville  
 Davis, J. Weyman, Athens  
 Davis, W. B., Augusta  
 Davidson, A. A., Augusta  
 Davison, Hal M., Atlanta  
 Davison, T. C., Atlanta  
 Derrick, H. C., Oglethorpe  
 Dew, J. Harris, Atlanta  
 Dickson, Roger W., Atlanta  
 Dillard, Guy J., Columbus  
 Dillard, J. B., Davisboro  
 Doster, H. W., Rocky Ford  
 Dougherty, Mark S., Atlanta  
 Downey, J. H., Gainesville  
 Dunn, L. B., Savannah  
 DuVall, Beecher, Atlanta

## E

Echols, Geo. L., Milledgeville  
 Edgerton, M. T., Atlanta  
 Egan, M. J., Savannah  
 Elder, C. D., Marietta  
 Elliott, W. G., Cuthbert  
 Elrod, J. O., Forsyth  
 Equen, Murdock, Atlanta  
 Eubanks, Geo. F., Atlanta  
 Evans, W. W., Blakely

## F

Faggart, Geo. H., Savannah  
 Fancher, J. K., Atlanta  
 Farmer, C. H., Macon  
 Ferguson, C. H., Thomasville  
 Ferguson, I. A., Atlanta  
 Ferrell, T. J., Waycross  
 Fincher, E. F., Jr., Atlanta  
 Fincher, E. F., Sr., Atlanta  
 Floyd, Earl, Atlanta  
 Folk, Jno. J., Augusta  
 Fort, A. G., Atlanta  
 Fountain, Jas. A., Macon  
 Fowler, A. H., Marietta  
 Fowler, M. F., Atlanta  
 Fowler, R. W., Marietta  
 Franklin, R. C., Swainsboro  
 Franklin, V. E., Graymont  
 Fuller, Geo. W., Atlanta  
 Fullilove, H. M., Athens  
 Funkhouser, W. L., Atlanta

## G

Gaines, C. C., Atlanta  
 Gaines, Lewis M., Atlanta  
 Garrard, J. L., Rome  
 Garrison, D. H., Tate  
 Gheesling, Goodwin, Greensboro  
 Gholston, W. D., Danielsville  
 Gibson, Roy L., Augusta  
 Giddings, Glenville, Atlanta

Gilbert, R. B., Greenville  
 Gober, W. M., Marietta  
 Golsan, W. R., Macon  
 Goldsmith, W. S., Atlanta  
 Goodwyn, Thos. P., Atlanta  
 Gray, J. D., Augusta  
 Greene, Ed H., Atlanta  
 Greer, Chas. A., Oglethorpe  
 Greet, C. B., Brunswick  
 Grove, Lon, Atlanta

## H

Harbin, Lester, Rome  
 Harbin, W. P., Jr., Rome  
 Hall, J. I., Macon  
 Hall, O. D., Atlanta  
 Hall, Thos. H., Macon  
 Hames, Fred, Atlanta  
 Harp, Steve L., Cusseta  
 Harper, G. T., Dewy Rose  
 Harrell, H. P., Augusta  
 Harris, H. B., Athens  
 Harrison, M. T., Atlanta  
 Harrold, Chas. C., Macon  
 Harrold, Thos., Macon  
 Harvard, V. O., Aribi  
 Haywood, M. F., Alto  
 Head, M. M., Zebulon  
 Heller, W. B., Toccoa  
 Helton, B. L., Sandersville  
 Henry, C. G., Augusta  
 Herman, E. C., LaGrange  
 Hicks, Chas. L., Dublin  
 Hinton, O. H., Morris Station  
 Hilsman, A. H., Albany  
 Hodges, J. H., Hapeville  
 Hodgson, F. G., Atlanta  
 Hailey, Howard, Atlanta  
 Holland, J. G., Augusta  
 Holliday, J. C., Athens  
 Holloway, Chas. E., Augusta  
 Holmes, L. P., Augusta  
 Holmes, W. B., Wadley  
 Holton, C. F., Savannah  
 Houser, F. M., Augusta  
 Houston, W. R., Augusta  
 Howard, Lee, Savannah  
 Howell, Stacy C., Atlanta  
 Hubert, M. A., Athens  
 Huey, H. G., Homerville  
 Hull, J. M., Augusta  
 Hunt, J. E., Mt. Vernon  
 Hunt, K. S., Griffin  
 Hutchings, E. H., Sparta

## J

Jackson, J. L., Manchester  
 Jenkins, H. B., Thomasville  
 Jenkins, J. C., Hartwell  
 Jennings, W. D., Augusta  
 Jernigan, C. S., Sparta  
 Joiner, R. M., Moultrie  
 Jones, B. B., Metter  
 Jones, Jabez, Savannah

Jones, Jack, Atlanta  
 Jordan, W. P., Columbus  
 Joseph, Kellie, Alto  
 K  
 Keaton, J. C., Albany  
 Kelley, Wm. H., Augusta  
 Kelley, L. H., Atlanta  
 Kelly, G. Lombard, Augusta  
 Kemp, A. P., Macon  
 Kennedy, R. L., Metter  
 Kennedy, W. C., Talmo  
 Kenyon, S. P., Dawson  
 Kershaw, Marie M., Augusta  
 Ketchin, S. C., Louisville  
 Kilpatrick, C. M., Augusta  
 King, J. L., Macon  
 Kirkland, Spencer A., Atlanta  
 Kiser, W. H., Jr., Atlanta  
 Kite, J. H., Decatur  
 Klugh, Geo. F., Atlanta  
 Kracke, Roy R., Atlanta

## L

Lamb, R. B., Demorest  
 Lancaster, E. M., Shady Dale  
 Lancaster, H. H., Clermont  
 Landham, J. W., Atlanta  
 Lang, G. H., Savannah  
 Lanier, L. F., Sylvania  
 Laws, Clarence L., Atlanta  
 Lee, F. Lansing, Augusta  
 Lee, H. G., Millen  
 Lee, Lawrence, Savannah  
 Lennard, O. D., Tennille  
 Lewis, J. B., Waynesboro  
 Lewis, S. J., Augusta  
 Levy, J. H., Augusta  
 Levy, M. S., Augusta  
 Little, Arthur D., Thomasville  
 Lokey, Hugh, Atlanta  
 Lucas, W. H., Stillmore  
 Lunsford, Guy G., Millen

## M

Malone, S. B., Sandersville  
 Maloy, C. J., Helena  
 Mann, F. R., McRae  
 Martin, F. M., Shellman  
 Martin, Jas. J., Atlanta  
 Martin, R. V., Savannah  
 Massee, J. C., Atlanta  
 May, E. R., Lincolnton  
 McAfee, L. C., Macon  
 McAllister, J. M. C., Rochelle  
 McAllister, R. W., Rochelle  
 McArthur, T. J., Cordele  
 McCarver, W. C., Vidette  
 McCord, M. M., Rome  
 McCurdy, E. C., Shellman  
 McCurdy, W. T., Stone Mountain  
 McCulloh, Hugh, Jr., West Point  
 McCullough, K., Waycross  
 McDaniel, C. E., Augusta  
 McDaniel, J. G., Atlanta

McDaniel, J. Z., Augusta  
 McDonald, H. P., Atlanta  
 McElroy, S. L., Ocilla  
 McElveen, J. M., Brooklet  
 McGeary, W. C., Madison  
 McGahee, R. C., Augusta  
 McGee, H. H., Savannah  
 McGehee, Henry M., Atlanta  
 McLaughlin, C. K., Savannah  
 Mealing, H. G., Augusta  
 Mercer, J. E., Vidalia  
 Metts, J. C., Savannah  
 Michel, H. M., Augusta  
 Miller, G. T., Macon  
 Miller, R. L., Waynesboro  
 Minchew, B. H., Waycross  
 Mixson, W. D., Waycross  
 Mobley, J. W., Jr., Pelham  
 Mooney, A. J., Statesboro  
 Morrison, A. A., Savannah  
 Morrison, Howard J., Savannah  
 Moses, W. M., Uvalda  
 Mosteller, R., Augusta  
 Mountain, Geo. W., Augusta  
 Mulherin, F. X., Augusta  
 Mulherin, P. A., Augusta  
 Mulherin, W. A., Augusta  
 Murphey, Eugene E., Augusta  
 Muse, L. H., Atlanta  
 Myers, Wm. H., Savannah

## N

Nash, Thos. C., Philomath  
 Nicolson, Wm. Perrin, Atlanta  
 Norris, Jack C., Atlanta  
 Norvell, J. T., Augusta  
 Newberry, R. E., Atlanta  
 Newman, W. A., Macon  
 Newsom, N. J., Sandersville

## O

Odom, W. W., Lyons  
 O'Neal, Rance, West Point  
 Oppenheimer, R. H., Atlanta  
 Osborne, V. W., Atlanta  
 Overby, N., Sandersville  
 Overstreet, E. J., Baxley  
 Owensby, N. M., Atlanta

## P

Page, Hugh N., Augusta  
 Palmer, J. W., Ailey  
 Parkerson, I. J., Eastman  
 Patterson, J. C., Cuthbert  
 Paullin, Jas. E., Atlanta  
 Peacock, W. F., Vidalia  
 Penland, J. E., Waycross  
 Petway, T. F., Atlanta  
 Philpot, W. K., Augusta  
 Phinizey, Irvine, Augusta  
 Phinizey, T. B., Augusta  
 Pilcher, J. J., Wrens  
 Pinholster, J. H., Savannah  
 Pittman, C. S., Tifton  
 Poer, D. Henry, Atlanta



Porter, J. L., Rutledge  
 Postman, H. J., Augusta  
 Powell, C. E., Swainsboro  
 Powell, V. E., Atlanta  
 Prather, W. S., Americus  
 Price, W. Thos., Augusta  
 Pruitt, M. C., Atlanta  
 Pund, Edgar R., Augusta

## Q

Quillian, G. W., Atlanta

## R

Rawls, L. L., Macon  
 Reavis, W. F., Waycross  
 Redfearn, J. A., Albany  
 Redmond, C. G., Savannah  
 Reese, D. S., Carrollton  
 Revell, S. T. R., Louisville  
 Rhodes, John A., Crawfordville  
 Rhodes, R. L., Augusta  
 Richardson, Chas. H., Macon  
 Ridley, C. L., Macon  
 Ridley, Harry W., Atlanta  
 Roberts, C. W., Atlanta  
 Roberts, M. Hines, Atlanta  
 Roberts, Stewart R., Atlanta  
 Robertson, J. Righton, Augusta  
 Robinson, B., Atlanta  
 Rogers, F. S., Coleman  
 Rogers, Harry, Atlanta  
 Rogers, J. V., Cairo  
 Rogers, T. E., Macon  
 Rollins, J. C., Dalton  
 Rosen, E. F., Augusta  
 Rosen, Samuel F., Savannah  
 Ross, Thos. L., Atlanta  
 Rozar, A. R., Macon

## S

Sage, Dan Y., Atlanta  
 Saggus, J. G., Harlem  
 Sams, H. L., Dalton  
 Sams, J. R., Covington  
 Sanchez, S. E., Barwick  
 Sauls, H. C., Atlanta  
 Savage, C. P., Montezuma  
 Scales, S. F., Carrollton  
 Schaefer, W. B., Toccoa  
 Schley, Frank, Columbus  
 Scott, W. M., Milledgeville  
 Schwalb, Otto W., Savannah  
 Seckinger, D. L., Atlanta  
 Sellers, T. F., Atlanta  
 Selman, W. A., Atlanta  
 Shanks, E. D., Atlanta  
 Sharp, C. K., Arlington  
 Sharpley, H. F., Jr., Savannah  
 Shearouse, Wm., Savannah  
 Shellhouse, L. H., Willacoochee  
 Sherman, J. H., Augusta  
 Shippey, S. H., Rock Hill, S. C.  
 Silver, D. M., Augusta  
 Simmons, J. W., Metter  
 Simmons, Walter E., Metter

Simpson, J. A., Augusta  
 Sims, W. C., Richland  
 Sinkoe, Samuel J., Atlanta  
 Slocumb, C. B., Doerun  
 Smith, A. C., Elberton  
 Smith, B. H., Keysville  
 Smith, Carter, Atlanta  
 Smith, Geo. B., Rome  
 Smith, Geo. L., Swainsboro  
 Smith, J. Allen, Macon  
 Smith, J. E., Augusta  
 Smith, J. M., Valdosta  
 Smith, J. R., Hahira  
 Smith, Leo, Bainbridge  
 Smith, R. H., Lincolnton  
 Smith, S. S., Athens  
 Smith, Wm. A., Atlanta  
 Standifer, J. G., Blakely  
 Staton, T. R., Atlanta  
 Steele, V. S., Waycross  
 Story, J. W., Perry  
 Strickland, L. V., Cobbtown  
 Swanson, Cosby, Atlanta  
 Sydenstricker, V. P., Augusta

## T

Taylor, R. L., Davisboro  
 Teasley, B. C., Hartwell  
 Tessier, L. P., Augusta  
 Thomas, D. R., Jr., Augusta  
 Thomas, J. B., Augusta  
 Thompson, Cleveland, Millen  
 Thompson, W. C., Dublin  
 Thornton, Lawson, Atlanta  
 Thompson, O. R., Macon  
 Thurmond, J. W., Augusta  
 Timmons, C. C., Augusta  
 Toepel, Theodore, Atlanta  
 Tolleson, H. M., Hahira  
 Touchton, Geo. L., Savannah  
 Traylor, Geo. A., Augusta  
 Turner, W. W., Nashville

## U

Upshaw, C. B., Atlanta  
 Upchurch, W. E., Atlanta

## W

Wade, A. C., Augusta  
 Wahl, Ernest F., Thomasville  
 Walden, A. A., Augusta  
 Walker, C. H., Macon  
 Walker, Geo., Atlanta  
 Wall, J. C., Eastman  
 Wall, W. H., Pitts  
 Wallace, J. W., Douglas  
 Ward, Chas. D., Augusta  
 Ware, D. B., Fitzgerald  
 Ware, Ford, Macon  
 Ware, R. M., Fitzgerald  
 Waring, A. J., Savannah  
 Waring, T. P., Savannah  
 Warnock, C. Murray, Augusta  
 Watt, C. H., Thomasville  
 Weaver, H. G., Macon

Weaver, O. H., Macon  
 Weeks, R. B., Augusta  
 Wheat, R. F., Bainbridge  
 Whelan, E. J., Savannah  
 Whelchel, C. D., Gainesville  
 Whiteside, J. H., Statesboro  
 Whittendale, W. H., Norman Park  
 Wilcox, E. A., Augusta  
 Williams, C. O., West Point  
 Williams, L. W., Savannah  
 Williams, V. G., Grantville  
 Wilson, J. R., Thomson  
 Wilson, R. B., Atlanta  
 Willingham, T. I., Atlanta  
 Withers, S. M., Jr., Augusta  
 Wolfe, David W., Augusta  
 Wood, D. L., Dalton  
 Wood, O. S., Washington  
 Wood, R. Hugh, Atlanta  
 Woods, O. C., Milledgeville  
 Worthy, W. Steve, Augusta  
 Wright, Geo. W., Augusta  
 Wright, Jno. C., Augusta  
 Wright, J. J. C., Doerun  
 Wright, J. M., Augusta  
 Wright, Peter, Augusta

## Y

Yampolsky, Joseph, Atlanta  
 Youmans, H. D., Lyons  
 Young, W. W., Atlanta

## Z

Zachary, J. D., Gray

## GUESTS AND VISITORS

Barton, D. J., Anderson, S. C.  
 Brannen, Cecil, Bradenton, Fla.  
 Brinkley, Fred C., Ellenton, S. C.  
 Cason, T. Z., Jacksonville, Fla.  
 Chance, F. S., Clinton, S. C.  
 Crafton, J. N., Modoe, S. C.  
 Ellis, E. W., Dunbarton, S. C.  
 Frontis, D. B., Ridge Spring, S. C.  
 Gross, O. S., Spartanburg, S. C.  
 Haddock, S. H., Anderson, S. C.  
 Harrell, C. B., Rock Hill, S. C.  
 Johnston, B. R., Estill, S. C.  
 Mathis, W. H., N. Augusta, S. C.  
 Royal, H. Guilford, Langley, S. C.  
 Royal, Lewis B., Langley, S. C.  
 Sharpe, W. W., Spartanburg, S. C.  
 Simons, Edmund W., Summerville,  
 S. C.  
 Temples, P. M., Spartanburg, S. C.  
 Thorndeke, Abbott, Summerville,  
 S. C.  
 Timmerman, W. P., Batesburg,  
 S. C.  
 Walker, G. D., Johnston, S. C.  
 Walters, Waltman, Rochester, Minn.  
 Wilson, T. R. W., Greenville, S. C.  
 Wyman, Ben F., Columbia, S. C.  
 Zeagler, G. M., Palatka, Fla.

## OBITUARY

*Dr. Delvous Houseworth*, Douglasville; member; University of Georgia Medical Department, Augusta, 1895; aged 64; died at his home on April 18, 1934. He kept abreast of advancements in medicine and loved his work. Dr. Houseworth was one of the most able physicians in his section of the state. He began practice at Bill Arp and continued for about ten years until he removed to Douglasville. Dr. Houseworth was an eminent citizen, devoted to his family, and was a member of the Douglas County Medical Society, Masonic lodge and the First Baptist church. Surviving him are his widow and one daughter, Miss Hattie Houseworth. Funeral services were conducted by Rev. E. B. Awtry and interment was in the Douglasville cemetery.

*Dr. Jesse C. Bennett*, Jefferson; member; Emory University School of Medicine, Emory University, 1890; aged 65; died at his office of heart disease on April 19, 1934. He was interested in the public schools and the advancement of medicine and used his best talent for their success. Dr. Bennett was a member of the board of trustees of Martin Institute and the last surviving member of those who were elected or serving when he was elected. He served as Mayor of Jefferson and as Clerk of the Jackson County Superior Court. Dr. Bennett was an upright citizen and no more loyal advocate or friend could be found for any cause in which he believed was for the best interest of the county and community. Dr. Bennett served for many years as Secretary-Treasurer of the Jackson County Medical Society and since the consolidation of the counties of Jackson and Barrow, served in that capacity for the Jackson-Barrow Counties Medical Society. He was a member of the Odd Fellows, K. of P., Masons, and the Jefferson Baptist church. Surviving him are his widow and one daughter, Miss Mariam Bennett; one son, J. C. Bennett, Jr. Funeral services were conducted from the Jefferson Baptist church by Rev. R. M. Rigdon. Burial was in Woodbine cemetery.

*Dr. Charles McPherson Curtis*, College Park; member; Southern Medical College, Atlanta, 1887; aged 68; died of heart disease on May 6, 1934. He was born at Blue Ridge and came to Atlanta at an early age. After he graduated in medicine, he began practice in South Georgia, later moved to Henry county, thence to College Park. Dr. Curtis was widely known for his charitable practice and as an excellent physician. Dr. Curtis was on the medical staff of the Georgia Military Academy and for many years surgeon for the Atlanta and West Point Railroad, served two terms as Mayor of College Park and as a member of the Board of Education. He was a member of the Fulton County Medical Society and the College Park Methodist church. Dr. B. D. Gray conducted the funeral services from the College Park Methodist church. Burial was in College Park cemetery.

*Dr. Paul Lovejoy Holliday*, Athens; member; University of Georgia Medical Department, Augusta, 1917; aged 41; died of heart disease on April 22, 1934. He was born and reared in Athens and spent his entire life there, except while in a medical school and taking post-graduate work. Dr. Holliday was a member of one of the most prominent families of Clarke county, and known to hundreds of friends who admired him, not only for his professional attainments, but also for the many personal attributes. He served as Lieutenant in France during the World war. After he returned to the United States, he took post graduate work at New York and Philadelphia. Surviving him are his widow, parents, 4 sisters, Misses Kate and Mae Holliday, Athens; Miss Corene Holliday, Douglas; and Mrs. J. T. Ecker, Birmingham, Ala.; one brother, Dr. Henry Holliday, Georgetown, S. C. Funeral services were conducted by Dr. E. L. Hill from the First Presbyterian church. Interment was in Oconee Hill cemetery.

*Dr. David W. Baggs*, Ludowici; Emory University School of Medicine, Emory University, 1894; aged 63; died at a private hospital in Jesup on April 7, 1934. He was born and reared at Ludowici and spent almost his entire life at that place. His interest in public affairs of his town and county was keen and he held many offices of honor and trust. He was surgeon for the Atlantic Coast Line Railroad, and a member of the Masonic lodge and the Bethlehem Baptist church. Surviving him are his widow, two daughters, Mrs. Fred D. Beasley, Statesboro; Mrs. C. B. Hutto, Baton Rouge, La. Funeral services were conducted by Rev. Gordon B. Crawford from the Bethlehem Baptist church.

*Dr. Joseph A. Farmer*, Milledgeville; Emory University School of Medicine, Emory University, 1891; aged 76; died at his home on May 15, 1934. He practiced medicine at Lithonia for many years, later moving to Milledgeville where he endeared himself to the people by his professional services and other acts of kindness. Dr. Farmer was a member of the Methodist church. Funeral services were conducted by Rev. Foster Young and Rev. M. B. Sams from the Lithonia Methodist church. Burial was in East View Cemetery at Conyers.

*Dr. James A. Stothart*, Savannah; University of Georgia Medical Department, Augusta, 1888; aged 80; died at his home on May 13, 1934. He was born in Aiken, S. C. Dr. Stothart had been a resident of Savannah for fifty years. He was widely known and had many friends. He was recognized for his ability as a practicing physician. Owing to his advanced age. He retired from practice about ten years before his death. He was a member of the Knights of Pythias and the Wesley Monumental Methodist church. Surviving him are his widow; three daughters, Mrs. Frank Sloat, Savannah; Mrs. Jackson Mangum,



Savannah; and Mrs. Gus Speth, Daytona Beach, Fla. One son, J. L. Stothart, Miami, Fla. Funeral services were conducted from the chapel of Henderson Brothers by Rev. Chas. Jenkins. Burial was in Hillcrest Memorial Park cemetery.

Dr. V. J. Brown, Buckhead; Lincoln Memorial University Medical Department, Knoxville, Tenn., 1905; aged 56; died at his home after a long illness on May 30, 1934. He was a native of Union county and moved to Buckhead a number of years ago. Dr. Brown was a successful physician and a prominent citizen. Surviving him are his widow, one daughter, Mrs. O. M. Warner, Pittsburgh, Pa.; two sons, Harry Brown, Pittsburgh, Pa., and V. J. Brown, Jr., Buckhead. Funeral services were conducted by Rev. Reeves and burial was in the Buckhead cemetery.

#### DR. ALBERT LEROY CRITTENDEN

WHEREAS, in the sad and tragic death of Dr. Albert Leroy Crittenden, the Randolph County Medical Society has lost a life long member; and WHEREAS, we feel that a deep bereavement has come upon us as individuals and as a Society, we the members of the Randolph County Medical Society, wish to express our appreciation of his faithful services.

Dr. Crittenden was born in Shellman, Ga., April 2, 1879. He was graduated from Shellman High School 1895; Gordon Institute 1898; taught school 1898-1899. Attended Tulane University of Louisiana Graduate School of Medicine, New Orleans, 1899-1900, and graduated from the Atlanta Medical College in 1902. He was a member of the Methodist church, and served on the Board of Trustees until his death. At one time he was a member of the State Board of Health.

He was a man of sober judgment, fearless of criticism, and steadfast in resolve. No matter the color, or station in life, he was ever prompt and willing to go to those in need and to those who were sick, always putting his professional duty before his own personal gain.

In all his sacrificial labors, he kept unaltered his gentleness of spirit, his patience, his kindness, and his desire for service. The hearts of many people were extremely saddened at the report of his death—literally hundreds attesting to his faithful ministry.

As a husband and father, he showed the tenderest love, and in turn he was enriched by the most ardent affection. A sorrowing community will long revere his memory.

THEREFORE, be it resolved by the Randolph County Medical Society, that we offer this as an appreciation of his useful life. That we extend to his family our heartfelt sympathy.

RESOLVED further, that this appreciation be entered on the records of the Randolph County Medical Society, and that a copy be sent his bereaved family.

THE RANDOLPH COUNTY MEDICAL SOCIETY

#### BOOK REVIEWS

*New and Nonofficial Remedies*, 1934, containing descriptions of the articles which stood accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1934. Cloth. Price, Postpaid, \$1.50. Pp. 510; lx. Chicago: American Medical Association.

*New and Nonofficial Remedies*, 1934, has the same pleasing format and helpful mechanism that has characterized it in past years. The enrichment of the indexing started a few years ago is continued and its value even increased by some desirable simplification of cross references.

The Council has made the usual careful revision of the book. The general article Lactic Acid-Producing Organisms and Preparations has been practically rewritten. The chapter on Arsenic preparations has undergone some revision, especially in the statement concerning Neoarsphenamine. The descriptions of Chiniofon and Vioform have been revised in the light of recent developments in the treatment of amebiasis. The article on Ethylhydrocupreine has been revised to delete references to Optochin Base, which has been omitted; Optochin Hydrochloride has been retained, being recommended only for external use. The description of Typhoid Vaccine has been revised to give the dosage of the combination of typhoid and paratyphoid organisms and to mention the use of typhoid vaccine in nonspecific protein therapy. A number of revisions of the Council's Rules have been made, particularly with reference to the names of products, which is one of the most frequent and troublesome of the problems with which the Council has to deal. Comparison with last year's volume will show that revisions of more or less importance occur in many other chapters.

Among the preparations newly included in this volume are: Aminophylline, a double salt or mixture of theophylline and ethylenediamine, with the advantage of greater solubility over other theophylline preparations; the new alum precipitated diphtheria toxoid; Neo-Iopax, a new medium for intravenous urography; Benzedrine, an ephedrine substitute; serums containing type II pneumococcus antibodies, which the Council has recently recognized as worthy of clinical trial in view of improved preparations and technic; Autolyzed Liver Concentrate and Extralin, two new liver preparations for use in the treatment of pernicious anemia; Metycaine, a new local anesthetic; and Sodium Morrhuate, a salt of the fatty acids of cod liver oil, proposed for use as a sclerosing agent.

*Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association for 1933*. Cloth. Price, Postpaid, \$1.00. Pp. 188. Chicago: American Medical Association.

The main bulk of the volume, which is, incidentally, considerably increased over that of recent annual volumes, is taken up with reports on products which the

Council has found unacceptable for inclusion in New and Nonofficial Remedies. Of special note are: The report on Alpha-Lobelin, a drug upon which the Council in 1927 issued a preliminary report but which is now found not to have established itself as a respiratory stimulant of as great usefulness as carbon dioxide and oxygen; the report on a number of preparations marketed by the Upjohn Company with unwarranted, misleading and unscientific claims; the report on Clavipurin, a preparation of the alkaloids of ergot, marketed without adequate declaration of the composition and without adequate standardization under a nondescriptive proprietary name with unwarranted therapeutic claims; the report on Diampysal, another pyridine derivative proposed for use in bacterial infections, convincing evidence for the therapeutic value of which is lacking; the report on Euphydigital, an irrational mixture of digitalis and a theophylline preparation marketed under an uninforming, proprietary name, with exaggerated and unwarranted claims for its therapeutic value; the report on Guphen, stated to be the guaiacol ester of phenylcinchoninic acid, marketed with unwarranted therapeutic claims under an uninforming, proprietary name and having no proved advantage over its constituents administered separately; the report on Niazo, a pyridine compound of unsubstantiated value as a urinary antiseptic; the report on Omnadin, a preparation recognized for use for nonspecific lipoprotein therapy practically as a cure-all; and the report on a group of endocrine preparations of the Rovin Laboratories variously unacceptable as being of indefinite composition and of undemonstrated therapeutic value.

A feature of marked current interest in this volume is the preliminary report on Alpha-Dinitrophenol, the new drug for acceleration of cellular metabolism. The Council voices a warning on the dangers attending the use of this drug; this warning has been increasingly justified in reports of fatalities since the appearance of the Council's report in July of last year. Other preliminary reports which make this volume one of the most interesting issued by the Council in recent years are those on Dilaudid, a new narcotic drug related to morphine; Faudin, a new antimony compound for use in the treatment of bilharziasis and granuloma inguinale; and Hippuran, a new product for intravenous and oral urography. The comprehensive and definite special report on estrogenic substances furnishes a much needed review of the present status of such products in gynecologic therapy. The Council insists upon the doctrine that basic laboratory investigation of these substances should precede clinical use. Of interest to hospital authorities, especially in connection with the book *Hospital Practice for Interns* recently issued by the Council in collaboration with the Council on Medical Education and Hospitals, is the special report. The *Hospital Formulary*, by Hatcher and Stainsby of New York. It outlines a plan characterized by the highest regard for the principles of rational drug therapy. Of more general interest is the Council's second report on the intravenous use of barbitol compounds which is

the result of a questionnaire sent to representative physicians. In view of the answers to the questionnaire, the Council reaffirmed its previous decision concerning the limitations of intravenous use of barbitol compounds; namely, that these preparations should be administered intravenously only in a limited number of conditions in which administration by other routes is not feasible. The report carefully details these conditions. The lengthy report on the omission of Pyridium is an outstanding example of the meticulous fairness characteristic of the Council's treatment of the manufacturers of commercial preparations. In connection with the omission of Pyridium should be noted the report which declares Azophene (Mallophone) not acceptable. This product has been shown to be identical with Pyridium and the Council considers the claims for its usefulness as a local, general, or urinary antiseptic as unwarranted, as are those for Pyridium.

#### SUMMER DIARRHEA IN BABIES

Casec (calcium caseinate), which is almost wholly a combination of protein and calcium, offers a quickly effective method of treating all types of diarrhea, both in bottle-fed and breast-fed infants. For the former, the carbohydrate is temporarily omitted from the 24-hour formula and replaced with 8 level tablespoonfuls of Casec. Within a day or two the diarrhea will usually be arrested, and carbohydrate in the form of Dextri-Maltose may safely be added to the formula and the Casec gradually eliminated. Three to six tablespoonfuls of a thin paste of Casec and water, given before each nursing, is well indicated for loose stools in breast-fed babies. Please send for samples to Mead Johnson & Company, Evansville, Indiana.

#### POTENCY OF MILKS FORTIFIED WITH RESPECT TO ANTIRACHITIC PROPERTIES: CLINICAL TESTS AND A PROPOSED METHOD OF PROCEDURE

Martha M. Eliot and Grover F. Powers, New Haven, Conn. (*Journal A. M. A.*, June 2, 1934), propose the following procedure for making clinical tests of the preventive potency of milks "fortified" with antirachitic properties: The studies must be carried out on groups both of normal and of premature infants fed artificially. At least one-half of the normal children should belong to the races especially susceptible to rickets. The infants should be, preferably, under 6 weeks of age and not over 8 weeks. The children should be under observation until they are at least 6 months of age, in some cases longer. They should live in the north temperate zone and the study should be conducted from October to May, since then the factor of sunlight as a contributory antirachitic measure is minimal. No infant should be enrolled who has had previous antirachitic treatment. No other antirachitic should be given during the investigation other than the "fortified" milk under study. The infants studied should be chosen from well-baby clinics. They must be carefully examined and roentgenograms of wrists and



forearms must be taken at intervals of four weeks according to a uniform standardized technic. The primary basis for appraisal in these tests should be changes in the roentgenographic picture; clinical observations are only contributory and supplementary. There must be accurate measurements at each examination of the growth of each child in respect to length and weight. There must be adequate follow-up visits of each infant in its home. An accurate record of the amounts of milk taken must be made, for only in this way can the amount of the antirachitic substance be determined. In order to minimize errors an adequate amount of the "fortified" milk should be supplied for the entire household of the infant under investigation and strong effort made to have this milk the only kind used by the family. The milk mixtures should, if possible, contain the same added carbohydrate in approximately the same relative amounts; likewise the mixtures should contain approximately the same relative amounts of fat. All infants should receive the same antiscorbutic substance, and extraneous vitamin D containing foods, such as egg yolk, must be excluded. Each study should be carried out under the direction of an experienced pediatrician with such other assistants as may be required. The director must be able not only to correlate and appraise data but also to inspire assistants and mothers with enthusiastic and intelligent interest. Only in this way can a degree of accuracy be achieved which, while not comparable to that of many laboratory biologic tests, is nevertheless acceptable from a clinical standpoint in the light of present knowledge.

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DR. ALBERT F. BRAWNER, Resident Physician.



# THE JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA

DEVOTED TO THE WELFARE OF THE MEDICAL PROFESSION OF GEORGIA  
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## ENDOCRINE ASPECTS OF GYNECOLOGY\*

EMIL NOVAK,† M.D.  
*Baltimore, Md.*

No especial apology need be made for the subject of this lecture, for endocrinology has established itself so thoroughly that it must now be reckoned with by practitioners in all branches of medical science. Its growing importance in the field of internal medicine needs no emphasis, nor its indispensability to the practicing surgeon. But in no field are its implications more clearly manifest and more fundamental than in that of gynecology. There are two reasons for this.

The first of these is the fact that some of the most brilliant endocrinologic advances of recent years have been in the field of reproductive physiology, and these advances have been directly applicable to many gynecological problems. The second reason is the great frequency of the so-called functional gynecological disorders, so that an ever-increasing number of women's ills are being made explainable by the results of experimental laboratory investigations. Show me a gynecologist who takes no stock in endocrine research, and I will show you a purely mechanical gynecological surgeon. On the other hand, the man who has the intelligence and wisdom to appreciate the importance of the endocrines in the interpretation of gynecological problems is quite sure to be one who practices gynecology on a scientific, broadly biologic basis which makes the specialty, as its name indicates, really the science or study of woman.

So rapid and kaleidoscopic have been the advances in reproductive physiology that one might readily write an altogether new paper certainly every year on the title which I have selected. This is not the place to review the history of our knowledge on this subject, and I have done this elsewhere. In the present paper my object will be merely to point out how some at least of this new knowledge touches upon the daily life of the gynecologist, as well as the general practitioner, who is called upon to treat so large a proportion of women with the so-called minor gynecological ailments, so often functional.

I shall disappoint those who expect rules-of-thumb for the endocrine treatment of gynecological disorders, for it may as well be confessed at the very outset that the accomplishments of endocrine therapy in the gynecological field have thus far been as a whole disappointing. The chief reward of an interest in endocrinology at the moment is in the more intelligent approach it gives to many of our clinical problems, although there can be little doubt that the therapeutic reward will follow in due time. One of the blessings conferred by the newer knowledge of the endocrines has been to show the incorrectness and often the absurdity of the older explanations and methods of organotherapy.

It would be stark truism to urge that we cannot intelligently discuss abnormalities of function unless we know the normal mechanisms, so that I propose first to discuss in the simplest possible fashion the role of the hormones in the normal reproductive cycle. To one who is at all familiar with this, it is not necessary to emphasize what is sound and rational in organotherapy, and what is unsound and irrational.

What, for example, are the hormones concerned in menstruation? The ovarian hor-

\*Abner Wellborn Calhoun Lecture delivered before the Medical Association of Georgia, Augusta, May 9, 1934.

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mones immediately concerned with the process are folliculin (theelin, female sex hormone) and progestin. The first of these is the product of the maturing graafian follicle, though it is also secreted by the corpus luteum into which the collapsed follicle is metamorphosed after the discharge of the egg. The latter process (ovulation) occurs usually about half way between menstrual periods, in the case of women with cycles of about 28 days, though there are many individual variations in either direction, as will be emphasized later. The second ovarian hormone is progestin, the characteristic hormone of the corpus luteum, and, so far as we know, produced only by that structure. Folliculin, therefore, is present throughout practically the entire cycle, while progestin is found only in the post-ovulatory phase.

What effects are produced by these two substances upon the uterine mucous membrane? The effect of folliculin is to produce increasing growth changes and hyperemia, while the special function of the progestin is to bring about secretory changes in the gland epithelium. It therefore follows that such secretory changes are never present before ovulation, and that they are never present when ovulation has failed to occur, as we shall see is the case in certain well-known disorders.

What is the cause of the actual bleeding of menstruation? The immediate cause, of course, is the breaking down and desquamation of the endometrium, associated with actual opening up of blood vessels and probably an increase in their permeability. What, however, is the endocrine cause for this catabolic process? The evidence seems quite convincing that this is due to the sharp withdrawal of the folliculin supply to the endometrium. There is a steady increase in the growth and hyperemia of the endometrium as the cycle advances, up to a certain point, probably a day or two before the actual onset of the flow. At this point the further production of folliculin is sharply inhibited, and the props are, so to speak, knocked from beneath the endometrium, which thus undergoes partial destruction and is cast off, with menstrual bleeding as a manifestation. I state this view quite arbitrarily, but it is supported

by a wealth of evidence, as I have elsewhere shown.

What factor is it that brings about the rather abrupt inhibition of folliculin production which is responsible for bleeding? Here again, for purposes of brevity, I shall omit controversy, merely urging that the evidence indicates that the responsible mechanism is dependent upon the reciprocal relations existing between the secretory activity of the ovaries and that of the anterior hypophysis. The latter, as has been clearly established by the work of Smith and Engle in this country and that of Zondek and Aschheim in Germany, is the power behind the ovarian throne. The sex hormones of the anterior hypophyseal lobe are essential to the maturation of the follicles and the production of folliculin (Prolan A effect), and also for the conversion of follicular epithelium into lutein cells (luteinization) and the production of progestin (Prolan B effect). Whether Prolan A and Prolan B are two different sex hormones or whether they represent merely different phases of activity of a single hormone is still unsettled, and the question need not be further discussed here. But that two types of effect of the anterior hypophysis are elicited permits of no doubt.

Dominating as the anterior hypophyseal endocrine effect is, however, it is subject to at least a measure of retaliation from the ovary, for it has been shown that the ovarian hormones exert a reciprocal effect upon the pituitary endocrine function. For example, it has been shown by Moore, Hisaw and others that a sufficient dosage of folliculin inhibits the production of the pituitary sex hormone. In the normal cycle, therefore, when the production of folliculin reaches a sufficiently high point, as it does shortly before menstruation, there occurs an inhibition of the pituitary principles which motivate folliculin production, and a sharp drop in folliculin results, with menstrual bleeding as a consequence. The mechanism, therefore, is not unlike that employed in the thermostat arrangement of the heating systems in our homes. The hypophyseo-ovarian relationship thus appears to be an automatic, self-regulatory one, and this concept is applicable to many of our gynecological prob-



lems, especially that of functional bleeding.

For example, it is not unusual, in taking careful gynecological histories, to find that slight, or at times fairly free bleeding is observed about midway between menstrual periods. That similar intermenstrual bleeding, either macroscopic or microscopic, is quite constant in monkeys has been shown by the work of Hartman. The time at which the bleeding is noted is just after the rupture of the follicle, when a temporary drop in the folliculin level occurs, and it is this drop which brings about the staining. Sometimes the latter is so free that it simulates a menstrual period, so that the woman apparently menstruates twice a month, one flow following ovulation, the other dependent on the folliculin drop incident to the functional withdrawal of the corpus luteum.

One other very important form of gynecological bleeding is explainable along similar lines. I refer to the so-called functional type of uterine bleeding, so common in women at or near the menopause, but often seen at puberty and during adolescence, though it may arise at any age during the reproductive epoch. In this disorder the maturing follicle does not rupture, but persists and continues to grow and produce increasing amounts of folliculin, until a certain level is reached, when anterior hypophyseal function is inhibited. This brings about a drop in folliculin production, with clinically a phase of bleeding, which may be profuse and prolonged. In other words, as long as the endometrium is receiving a steady supply of folliculin bleeding is absent, but when this supply is cut off abruptly, bleeding occurs. The primary seat of the disturbance is unquestionably in the anterior hypophysis, but the hormones immediately concerned are those of the ovary.

This statement is borne out by the findings in the ovary and in the endometrium. In the former corpora lutea are characteristically absent, for ovulation does not occur, explaining why such women are sterile. The endometrium in such cases characteristically shows a greater or less degree of the microscopic picture designated as hyperplasia, due to an excessive and prolonged folliculin effect, in the absence of progestin. Secretory activity in the gland epithelium, because of

this progestin lack, is never seen. If it were, the designation of hyperplasia would be incorrect.

A rational treatment for these cases, and one which would almost surely be successful, would be the administration of progestin. As yet, however, there is no commercially available preparation of this substance, so that several years ago we began to employ what seemed like the most rational substitute for it, i.e., the luteinizing principles obtainable from the urine of pregnant women (Novak and Long). This remains the most satisfactory endocrine treatment for functional bleeding, though there is much doubt as to the mechanism of its action. For a discussion of the rationale and the method of treatment, the reader may be referred to our original paper.

In minor degrees of this functional bleeding the menstrual excess may be only slight, and furthermore, the same essential functional abnormality, with absence of ovulation, may at times be seen in women who are menstruating fairly regularly, and in normal amount. This group of cases of "anovulatory menstruation", while relatively a small one, is of great importance, because it explains certain cases of sterility, as I have discussed more fully in two recent papers, so that I shall not elaborate upon the subject here. Is there any way in which we can determine this absence of ovulation? There is such a way, through histological examination of the uterine mucosa just before an expected menstruation. To obtain this tissue anaesthesia is not always necessary, for in many women a very small curette can be introduced into the uterus without preliminary dilatation of the cervix. Or, if one prefers, the method of suction suggested by Klingler and Burch may be employed, or, even better, the more powerful aspiration through a cannula attached to an electric pump, as recently suggested by Lorincz, of Budapest. I have recently been employing the latter technique with much satisfaction, as I hope to detail in a later paper.

This ovulation test I now look upon as an indispensable part of the routine examination of cases of sterility in which other more obvious factors can not be found. The pres-

ence or absence of secretory changes in the gland epithelium is the determining factor. The diagnosis can usually be made by a glance at the stained secretion, but in some cases it may be necessary to stain for glycogen, always absent if ovulation has not occurred, and present if it has taken place.

So far I have spoken chiefly of excessive menstruation. What about the other quantitative disorder, amenorrhea? Here the problem is even more difficult, because of the fact that the possible factors in the etiology of amenorrhea cover a wider, more constitutional range than do those of functional menstrual excess. Confining ourselves only to the endocrinopathic type of amenorrhea, the three ductless glands with which we must most frequently reckon are the ovaries, the pituitary, and the thyroid, although other endocrine structures, such as the adrenal, may at times be concerned.

Of these endocrinopathic types, the one most favorable from the standpoint of treatment is that due to thyroid deficiency, easily demonstrable by basal metabolism determination. I am always glad to receive a report of a minus 40 or minus 50 rate in such cases, for the simple administration of thyroid extract is very likely to re-establish menstrual rhythm in such cases. Most of this group present other stigmata of thyroid deficiency, especially obesity of fairly general distribution, with often a myxedematous character.

Unfortunately, however, thyroid excess may likewise bring about amenorrhea, and I have seen this symptom in quite a number of cases of toxic goitre. Indeed, we know very little as to the nature of the relation which undoubtedly exists between the thyroid and the gonads where there is no thyroid deficiency or an actual hyperthyroidism. We are obliged in such cases to have recourse to some form of ovarian therapy, as in the hypogonadal cases.

The latter group is a very poorly defined one and the term is undoubtedly often used to cloak our ignorance of the etiology in many instances. The tendency has been, as a matter of fact, to put in this group pretty much all cases except those in which a thyroid or pituitary causation can not be demonstrated or even logically assumed. The nor-

mal prototype of hypogonadal amenorrhea is that which occurs at the menopause, when gonadal hypofunction occurs normally. With the amenorrhea there is usually a more or less marked increase in weight, with especially heavy deposits about the abdomen, buttocks and hips. If, with this, there are vasomotor symptoms like those of the normal menopause, there would be little question as to the hypogonadal nature of the amenorrhea.

However, there are not a few cases of amenorrhea not associated with obesity or vasomotor symptoms, with none of the earmarks of hypopituitarism, and with perfectly normal basal metabolism. While these cases are often spoken of also as primarily hypogonadal, there is much question as to their real nature. It seems more likely that the underlying disorder involves the pituitary sex hormone, without any involvement of the metabolic mechanism, which many now believe is directed from the hypothalamic regions of the brain. While even with a normal metabolic rate small doses of thyroid may be given, we are usually obliged to resort, always without enthusiasm, to the use of ovarian therapy in one form or another. The female sex hormone (theelin or amniotin) is the best form and these substances should, I believe, be combined with one of the prolan-containing preparations (Antuitrin S or Follutein), because the latter are not only the nearest approach to a substitute for the lutinizing ovarian hormone (progestin) but they also, at least in many experimental animals, appear to have a motivating and stimulating effect upon the ovarian secretory function in general. I am stating these concepts very briefly and arbitrarily in this paper, because I have discussed them much more fully elsewhere.

The hypopituitary type of amenorrhea is often quite clearly distinguishable clinically, appearing most characteristically as a part of the well-known Frohlich syndrome (adiposogenital dystrophy). Patients of this group are commonly of rather short stature, with often delicate features, rather small hands and tapering fingers, and with a characteristic type of obesity. There are usually rather heavy shoulder-pads of fat, a large bust, a small waist, and a heavy girdle of fat about



the abdomen, buttocks and hips. There may be a tendency to hirsutism, but this is by no means the rule. In only a small group, in my experience, is there much complaint of the so-called "pituitary headache" or vertigo, and when these symptoms are pronounced, and especially when there are associated visual disturbances, one must be on the watch for neoplastic rather than functional hypophyseal disease. Most often the basal metabolic rate is normal or only slightly diminished.

There can be little doubt that the amenorrhea in these cases is due to a diminution in the production of the pituitary sex hormones which normally are essential for ovarian activity. The metabolic changes, on the other hand, are now believed to be due to associated disturbances in the hypothalamic regions of the brain immediately contiguous to the anterior lobe. In spite of this, this clinical type of amenorrhea is still quite generally spoken of as hypopituitary.

Its treatment consists of various combinations of thyroid, pituitary and ovarian substances. The oral administration of pituitary substances probably has no effect in the doses usually advised, though enormous dosage is believed by some to be of value. The prolan-containing "pituitary" preparations now so popular for hypodermic use are dependent for any activity on a substance which is probably not of pituitary origin, for the evidence is accumulating that prolan is a product of trophoblastic rather than pituitary activity. However, they do have, as already stated, a stimulating effect upon the function of the gonads, in some of the lower animals at least, though their effect upon the human ovary is still a matter of question. Their use is not perhaps altogether irrational, though good clinical results are obtained in only a comparatively small proportion of cases, more especially when they are combined with the female sex hormone, as in the hypogonadal cases already mentioned. Finally, practically all clinicians, in the treatment of these cases, resort also to the inevitable pinch of thyroid, which many believe is far more valuable than any form of ovarian therapy as yet available. Light radiation of the pituitary or the ovary are used by some clinicians, but they

are still to be looked upon as "shots in the dark", and the clinical results are anything but impressive.

All in all, therefore, the results of organotherapy in amenorrhea are as yet very disappointing, though there can be little doubt, from the rapid strides being made in reproductive physiology, that before many years our endocrine treatment of amenorrhea, as well as other menstrual disorders, will be far more scientifically precise and satisfactory than it is at present. In the meantime, it should be remembered that amenorrhea is in itself a harmless symptom, so that, if it were not for the commonly associated sterility, it would usually in itself need no treatment except a reassuring and instructional talk from the medical adviser.

If time permitted I would like to discuss the endocrine aspects of primary dysmenorrhea, that bane of gynecological practice. The disorder has a most protean etiology, in which constitutional, psychic, and endocrine factors are all involved, and often in an intertwining way. No problem requires a greater breadth of both wisdom and knowledge on the part of the physician. Some cases can be cured by simple constitutional measures, and some patients, I am sure, can be talked out of their dysmenorrhea by a wise medical consultant. In others there appears to be a real endocrine imbalance between the folliculin and progestin produced by the ovary, as Reynolds and I have urged in a recent paper. As a valuable but not by any means infallible therapeutic adjuvant in the management of these cases, I would suggest the use of one of the prolan-containing preparations from the urine of pregnant women, for these have been shown by Reynolds to exert a strong inhibitory effect upon the contractility of the uterine musculature. The reader who may be interested in a fuller discussion of the subject of primary dysmenorrhea may be referred to a previous paper by the present author.

Finally, I would have liked, had time permitted, to consider also the treatment of the vasomotor symptoms so characteristically noted in women at the menopause, but only a brief reference to this subject will be pos-

sible here. In the great majority of menopausal women, no endocrine treatment is necessary. Often the symptoms are very mild, or, when somewhat more troublesome, the patients can be made quite comfortable by such simple measures as reassurance, the avoidance of worry and stress, and the administration of such simple nerve sedatives as the bromides.

In a minority of women, however, the vasomotor flushes and sweats are extremely severe, recurring very frequently both by day and by night, so that the problem of relief becomes a very real one. In addition to all the simpler methods above mentioned, I have felt that the administration of the follicle hormone, in the form of either theelin or amniotin, is of great value in reducing the severity of the symptoms in these patients. I prefer the hypodermic route, the usual plan being to give 50 units every day or every other day for from two or three to six or eight injections, depending on the severity of the symptoms and the rapidity of the therapeutic response. A similar course is repeated from time to time as the symptoms reappear, while during the remissions nerve sedatives will usually suffice to keep the patient comfortable. There is a definite rationale in such treatment, and I do not believe that the results obtained are to be explained on a purely psychic basis.

There are still other functional disorders in which efforts at organotherapy may be made, but the results are usually disappointing, so that they need not be discussed in this paper, the avowed purpose of which, as I set forth at the outset, is to discuss broad principles of endocrinology rather than to outline plans of organotherapy. That a rich therapeutic reward will follow from the intensive studies being carried out in the field of reproductive physiology seems certain. In the meantime, no intelligent gynecologist can afford not to be familiar with the endocrine aspects of his specialty. Intricate and confused as the subject still is, enough is known to give one a new and fresher viewpoint concerning many old problems, and to add a new zest to the daily work of the gynecologist so fortunate as to be possessed of an interest in physiology and endocrinology.

## MEDICAL ECONOMICS AS RELATED TO PATIENTS OF THE LOW INCOME GROUP\*

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The problem of providing adequate medical care of patients who are financially unable to pay for such care, on the basis of what might be called reasonable cost, is a serious and pressing one. This problem did not arise at the time the present economic depression began. It existed before that era and had become so important that there was organized the Committee on the Cost of Medical Care in May, 1927, at a time when the country was enjoying an unprecedented period of prosperity. This committee, consisting of fifty members representing the field of private practice, public health, medical institutions, the social sciences and the general public engaged in an exhaustive study of the problem for a period of five years, accumulating with laborious pains an immense amount of data which was scientifically studied and from which was prepared an exhaustive final report.

The medical profession and the public are fully aware of the fact that during the past twenty-five years, particularly, the most astonishing progress has been made in the science of medicine as exemplified by a better understanding of the human body and of disease prevention and cure, rendered possible to a great degree by the discovery and invention of remarkable instruments and technics. However, as the Committee remarks, medicine has made much less phenomenal progress in rendering available to the people in general the utilization of these benefits. A barrier, largely economic in character, appears to stand between practitioners able and eager to serve, and patients who need their service but are unable to pay for it.

Consider specifically what certain typical procedures cost the patient on the present fee for service basis. In urban practice, diagnostic study in a given case might run as follows on a low cost level: Laboratory examinations

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—urinalysis, \$2.00; complete blood count, \$3.00, search for malarial parasites, \$2.00, blood Wassermann test, \$5.00, pthalein test for kidney function, \$3.00, complete stool examination, \$3.00; x-ray studies—teeth, \$5.00, gastrointestinal series, \$20.00, gall-bladder study, \$15.00; electrocardiogram, \$10.00. Let us assume that in a given case the above procedures would be sufficient to aid in establishing a diagnosis. In addition, the time and skill necessary for a properly taken history and thorough physical examination estimated at a total of two hours would not be excessive at a minimum charge of \$25.00. Suppose we analyze these charges. The laboratory examinations amount to \$18.00. The actual cost of making them amounts to fully \$8.00. The x-ray examinations amount to \$50.00. I should estimate the actual cost to be at least \$30.00 if one charges to cost such items as interest on the cost of equipment, depreciation of the equipment, materials used, and overhead charges such as rent for laboratory space, salary of technician and use of electric current.

We may say then that in a given hypothetical case the conscientious study of an internist approximates \$100.00 on an extremely low charge basis. Many of the charges given above are lower than many physicians would consider fair.

Consider the cost of surgical operations with the attending hospital and nursing expense. Consider obstetrical cost with the necessary pre-natal care so essential to decreasing mortality and the frequent hospital and nursing service which is advisable in such cases.

In rural practice, overhead costs are lower which will proportionately lessen charges made to patients by physicians. But here too, if the physician renders service commensurate with the present state of knowledge in the various fields of medicine, he must utilize expensive equipment. In addition, the transportation expense is greater.

It may thus be seen that the cost of rendering adequate medical care has risen enormously in the past 25 to 50 years over what it ever was in the thousands of years of recorded history. We are in a new era both from a scientific and an economic standpoint. The scientific new era is universally recognized. Is the economic new era similarly recognized?

Let us next inquire what is the ability of the people of the United States to pay for medical service of the type which may be called adequate. Studies by the Committee on the Cost of Medical Care, henceforth referred to in this paper as "The Committee," indicate that approximately 50 per cent of all families of two or more members had during the year 1928 total annual incomes of less than \$2,000.00 and 40 per cent more had incomes of \$2,000.00 to \$5,000.00 (An estimate of the distribution of "individual income recipients" in 1928 indicates that 80 per cent had incomes of less than \$2,000.00 and 95 per cent less than \$3,000.00.) Furthermore, it is shown by the Committee that such incomes are disproportionately distributed among various geographical sections of the United States. The population of the United States as a whole in 1926 had a per capita income of \$735.00, but in many states the per capita income was much lower than the average. To us it is of interest to know that in 1919 the per capita income in Alabama was \$321.00 a year; North Carolina, \$367.00; South Carolina, \$390.00; Florida, \$408.00; and Georgia, \$379.00. These figures, it should be remembered, were obtained before the current financial depression made its appearance and have undoubtedly diminished since that catastrophe.

How then is the bulk of the population to receive the medical care they need in view of the rising cost of service which is by no means excessive, as the Committee has clearly shown, and the low income out of which they must pay, if indeed they pay at all? One group, a large one, the indigent group, are cared for in municipal, state or county hospitals. To these patients the medical profession donates service, and the amount of these donations has enormously increased since 1930. The total number of patients treated at the Grady Hospital in Atlanta in 1928 was 41,149. This number progressively increased until in 1933 the total number treated was 91,408. It is conservatively estimated that the medical profession donated well over one million dollars in their care of the number of patients treated in 1933 at the Grady Hospital. Between the indigent group and the group with incomes of \$2,000.00 or more there is contained a very

considerable portion of the population whose annual income ranges from \$900.00 to \$1,800.00. This group is known as the low income group in urban communities. In rural communities they would properly be placed lower on account of the lower costs of living; probably from \$600.00 to \$1200.00 per year. It can readily be seen that less than average charges for medical service are more than the majority can pay for on the present fee for service basis.

The average family in the United States contains 4.1 members. Reliable estimates by the Committee place the cost of living on the lowest plane compatible with American ideas of a decent human existence, for a family of 5 in urban communities, at \$1200.00 to \$1300.00 per year. Following are the detailed items in a minimum budget prepared by the Charity Organization Society of New York, cents omitted:

Food .....	\$ 503.00—40%
Shelter and upkeep.....	407.00—32%
Clothing .....	193.00—15%
Health .....	33.00—
Insurance and savings.....	43.00—
Education, recreation, gifts to churches and organizations....	43.00—
Carfare .....	24.00—
All other.....	10.00—
<b>TOTAL.....</b>	<b>\$1256.00</b>

It should be noted that in this type of budget 87 per cent of the family income goes for food, shelter and upkeep, and clothing.

Such costs as those given above are lower in small cities than in large ones and still lower in villages and rural areas. However, the amount by which they are lower is not a very great one.

We might inquire next how frequently are the services of physicians and hospitals needed. One family in five, and 1 person in 17, statistics show, receive hospital care in the course of the year. Illnesses which involve hospitalization are responsible for 50 per cent of the total charges for medical care. It is thus evident that 2 families of every 5 and 1 person of every 8 1-2 needs a doctor every year. According to the Committee's survey of 9,000 families residing in 18 states, in the course of a year, 80 per cent of the

families receive the services of a physician, surgeon or other specialist, 20 per cent have one or more surgical cases, 20 per cent have at least one hospital case and 17 per cent have some nursing care. Of those who receive nursing care, only 9 per cent have nursing service other than, or in addition to, that provided by free visiting nurses. Can those in the low income group pay for such care and thus provide the doctor a decent living for himself and his family?

What information is available regarding incomes of physicians? In 1929, one-third of all private practitioners had net incomes of less than \$2500.00 per year. Approximately 40 per cent of the gross income of physicians is expended for professional expenses. More recent estimates put the average net income for 50 per cent of the doctors of the United States at \$2122.00. In Chester County, Tenn., the average (gross income of physicians in 1930 was \$2713.00 of which 36.5 per cent went for overhead, leaving a) net income of \$991.00 per year. In Toombs County, Ga., the same year, the (gross income of physicians was \$3467.00, a charge of 45.6 per cent for overhead expenses, leaving a) net income of \$1582.00.

It should thus be evident that the ability of a great part of the population to pay for medical care is inadequate and that the income of a great number of the doctors is likewise inadequate. We thus have a situation where doctors are either idle or spend the bulk of their time rendering service for which they cannot expect any remuneration, and on the other hand a large part of the population in need of medical service is unable to pay for it. There is thus a plethora of production and a dearth of consumption. Moreover, the quality of medical service suffers, not from the lack of professional ability of the doctors, but from the failure, for financial reasons, of the people to utilize necessarily expensive methods, equipment and procedures.

What has been done already in an effort to solve this problem of payment for adequate medical care to the low income group?

The final report of the Committee, published the latter part of 1932, contains two main conclusions known as the "majority



report" and the "minority report," both seeking to recommend plans of a constructive nature in an effort to solve the problem.

Immediately following the publication of these recommendations a veritable flood of comment appeared both in the lay and the medical press. Commendation and criticism both appeared. A highly controversial literature of no small proportion sprang up and continues to flourish.

In some localities in the United States the report of the majority was favored, while in others that of the minority. Both reports recognized the necessity of adopting the principle of "group payments." As the Committee states in the report, "The budgeting of family income, which has been encouraged of late years,—may assist families in planning for expenditures which can be determined in advance. But, the unpredictable nature of sickness and the wide range of professional charges for nominally similar services render budgeting for medical care on an individual family basis impracticable. On the present fee for service basis it is impossible for 99 per cent of the families to set aside any reasonable sum of money with positive assurance that the sum will purchase all needed medical care."

The Committee made extensive studies of the incidence of illness and of expenditures for medical care. As the report states, no conclusion has emerged more consistently than this: "The costs of medical care are felt as a burden more because they are unevenly distributed among the people than because of their total amount, and the further conclusion that the costs of medical care should be distributed over groups of people and over periods of time." The Committee further states that there are two major methods of distributing such costs: (1) insurance and (2) taxation.

The principle of insurance is universally familiar as applied to catastrophies such as fire, death or accident. Tax funds now meet about 14 per cent of the nation's annual medical bill. If it should become universal, state medicine or the complete socialization of medical practice would be here, with a consequent withering effect on individual initiative and progress, and with a more or

less severe depreciation of the quality of medical service.

The real difference between the majority and minority reports is on the question of the practical application of the group principle of payment. The majority report recommends that the medical profession be formed into large or small groups, preferably large, and these groups of physicians are to furnish medical care from centers, health or hospital centers, under some type of contract with groups of laymen who voluntarily pay an annual sum which provides medical care in cases of illness. The minority report recommends the furnishing of medical care by the individual physician as he is at present organized in county societies, the plan to be kept under professional control, the funds to be supplied in the same manner as the majority plan.

Inasmuch as the Committee on Economics of the Fulton County Medical Society in Atlanta has given nearly two years to a study of this entire subject, it might be stated at this point that we, as a Committee, favor the minority report.

Specifically, this minority report recommends a county medical society plan for furnishing complete medical care to persons of the low income group. This, I would emphasize, is not an insurance scheme and should in no way be so construed although it depends on what must be called an insurance principle, that of distributing the cost of catastrophies over the population as a whole.

I wish to further emphasize the fact that the recommendations contained in the minority report were signed by the representatives of the American Medical Association who were members of the Committee on the Cost of Medical Care: Dr. M. L. Harris, at that time President of the American Medical Association; Dr. George E. Follansbee, and Dr. Olin West. Despite the recommendations of these officials of the American Medical Association, subsequently the American Medical Association has been in the anomalous position of attempting to thwart many efforts various state and county societies have made and are making to carry into effect these recommendations. Specifi-

cally, these recommendations constitute plans sponsored by the American Medical Association and developed by state and county medical societies to solve this great and pressing problem.

Briefly, the minority insists that any plan which would be under the control of the medical profession, must guarantee not only nominal but actual free choice of physician and include all or a large majority of the members of the county medical society. The funds must be administered on a non-profit basis, and there must be no inclusion of cash benefits to patients. The minority recognizes the value of the trial of plans based upon these principles by county medical societies, believing that the county society is the proper unit of organization to attempt such experiments.

The minority states that its reasons for favoring thorough trial of the county society plan are that it places responsibility for the medical care of the community upon the organized physicians of that community, and in doing this avoids the control of the organized profession by lay corporations and insurance companies. It furthermore places responsibility for the quality of service directly upon the organized profession, and is the only plan which guarantees such quality of service, and makes this the only basis of competition. By this method, there is removed the possibility of unethical competition because it includes all the physicians of the community, and fixes a fee schedule. By this plan, further, solicitation of patients, underbidding for contracts and other evils of ordinary insurance plans are eliminated. Freedom of choice of physician is assured, and the essential personal relationship of physician and patient preserved. It is believed to be adaptable to every locality, both urban and rural. It provides for a minimum cost of administration by operating on a non-profit basis, in this way differing fundamentally from health insurance schemes promoted by lay corporations.

Despite acrimonious efforts by reactionary doctors and by those who may feel that their private interests are in jeopardy, the progressive wing of the medical profession is making gratifying progress and is putting into

effect highly constructive plans intended to solve this tremendous problem of medical care to the people unable to pay for it on the age long basis. Since the publication of the report by the Committee in 1932, many localities have adopted a plan based upon either the majority or the minority report. Thus the State Medical Association of California has approved the plan, and group practice has spread all the way from Los Angeles to Seattle. In Portland, Oregon, 170 doctors are now operating under the majority type of plan, and in Seattle over 300 doctors are so operating. In 1934 the Medical Society of New Jersey approved the majority plan, and group hospitalization plans have been approved by the Medical Society of the State of New York, by the Cleveland Academy of Medicine, and in at least 25 cities.

The Fulton County Medical Society has put into effect a plan which follows the recommendations of the minority group, and which is in accord with the principles advocated by the representatives of the American Medical Association. Time forbids details of the history of this movement in Atlanta. The plan was adopted by the Society after careful study of the whole problem by a Committee on Economics for a year and a half. The Committee did an immense amount of work before a plan was submitted to the Society. Finally the Fulton County Medical Relief Association was formed from those members of the Society who wished to participate in the plan. Out of a membership of approximately 387 members of the Fulton County Medical Society, 268 indicated a desire to cooperate. The minority who did not so indicate a desire to cooperate were either indifferent or expressed a greater or less degree of hostility, and some few might be termed irreconcilables.

It should be borne in mind that the plan was evolved primarily not to increase the income of doctors, but to render adequate medical care to a large group of persons unable to pay for it on the old basis. It thus aspires to be a great social, civic and humanitarian enterprise. Furthermore, the Association does not agree to furnish medical service to anyone, but simply agrees to pay the doctor who renders the service. Any physician who is a



member of the Fulton County Medical Society and who wishes to cooperate has the privilege of responding to calls from those who have become members of the Relief Association and entitled to its benefits. Any physician thus called has the privilege of declining the call just as he has under the old plan.

This Relief Association offers a means whereby persons of the low income group may obtain adequate medical care at a cost of \$1.00 initiation fee and \$1.50 a month. This privilege is open to any white person in Atlanta and vicinity who is in good health, except drug addicts and alcoholics, whose income does not exceed:

"\$75.00 per month for persons without dependents.

\$125.00 per month for persons with one dependent.

\$135.00 per month for persons with two dependents.

\$145.00 per month for persons with three dependents.

\$150.00 per month for persons with four or more dependents.

Membership is limited to individuals. Separate memberships may be carried for each member of the family." The affairs of the Relief Association are administered and controlled by a board of directors consisting of five physicians elected from the membership of the Fulton County Medical Society and who serve without pay. These directors are directly responsible in the last analysis to the Fulton County Medical Society to which they must render an account of their stewardship at stated intervals.

After a somewhat tempestuous start, the movement was finally successfully launched under a capable lay manager on April 1, 1934. All those interested in the organization realize that it is an experiment just as many of the Government's plans are experiments. At this particular time it is too soon to make any estimate as to the degree of success, but we all have reason to feel encouraged. From the experience which has been accumulated elsewhere it would seem that it is essential to have at least 5,000 beneficiary members of the Association before success can be anticipated, and better, 10,000 in

cities the size of Atlanta. It is also realized that success depends upon securing members in large groups from industrial organizations. To this end every effort is being made to enlist the interest and support of employers and employees and if possible secure the plan of payment known as payroll deductions.

It is also necessary for the financial success of the plan that, for this group of patients, physicians must accept a lower scale of fees than what might be termed standard charges. Such a schedule of fees has been prepared and agreed upon by the Fulton County Medical Society as they have come to realize that hitherto, from this group on the old fee for service plan, they were receiving much less than they will receive under this plan.

Time forbids a detailed account of the arduous path which has been trod by the five directors, and also of the multitudinous details and questions of policy which constantly appeared.

Finally, in connection with this entire subject, it is felt by many that no more pressing problem could engage the thoughtful attention of the Medical Association of Georgia than a careful and unbiased consideration of how this problem should be adequately dealt with in the different sections of our state.

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*Discussion on Paper by Dr. Lewis M. Gaines*

DR. B. T. BEASLEY (Atlanta): Dr. Gaines has presented this subject very thoroughly, and has presented to you one of our major problems. There are about four major problems confronting the medical profession in this country: 1. To furnish medical service to the lower income group of people at a price they are able to pay; 2. To provide medical and hospital service to indigent people of the rural communities; 3. To regulate the production of doctors, and 4. To redistribute the doctors in the country.

1. Dr. Gaines has shown in his paper how medical service can be furnished to the large group of people with low incomes at a price they are able to pay, in referring to the plan of the Fulton County Medical Society.

2. How are indigent people in the rural sections of the country going to get medical and hospital care? In the past, the burden of furnishing this service has been placed on the medical profession. The burden has become so great that the doctors are no longer able to carry it. Where should the burden be placed? Charity is a community problem, and should be furnished by the city, county, state, or national government.

More than 50 per cent of the average doctor's time

is devoted to charity practice. What other group of people devotes so much time in caring for the poor? Every county in the state should make provisions for giving their indigent sick medical and hospital care at the expense of the local government.

3. The production of doctors should be governed by the law of supply and demand. There should be in this country, according to the Association of American Medical Colleges, one doctor for approximately a population of 1200. We have one for approximately every 780 people. In Georgia, there is one for every 1000 persons; in Atlanta, one to every 518 persons; in Augusta, one to approximately every 468 persons. Thus in Georgia we have 20 per cent too many physicians, and in Atlanta and Augusta approximately 50 per cent too many doctors, and this is borne out by the fact that in Atlanta 90 per cent of the doctors are idle 50 per cent of the time. I presume this would apply to practically all other large cities.

Each year there is an excess of nearly 2000 young doctors in the country. The schools graduate nearly 5000, and only approximately 3000 die. The population increase of the United States is now practically at a standstill. It is claimed that by 1970 it will be static, or stable. Can it be wondered that 44,000 doctors make less than \$2500 a year, and that 22,000 make less than \$1500?

4. How are doctors going to be properly distributed? The cities are too crowded, while in many places in the rural counties there are too few. When counties make plans to take care of the charity sick and build hospitals and equip these hospitals with laboratories and provide other facilities with which young doctors who have graduated recently can do work in keeping with that in which they are trained, the doctors will go back to the counties, and thus a proper distribution will automatically take place.

DR. MONTAGUE L. BOYD (Atlanta): Dr. Beasley in his discussion of Dr. Gaines' paper has shown his agreement with the NRA policy of plowing up cotton and killing off hogs to control the supply. I hardly think that this type of control is applicable to the supply and distribution of the medical profession. I believe that the men to whom medical education should be given should be carefully selected, and that the medical institutions offering the less adequate types of education should be closed. It is difficult to better the methods which nature has employed to develop the best fit from among plants and animals, and it seems to me that the best service for sick people can be obtained by having an excess of physicians with the "survival of the fittest."

Dr. Gaines has made a very complete exposition of the subject of medical economics but there are a few points upon which I would like to elaborate, and I would like to begin my discussion by asking you if it is not true that the principal difficulty which the patient of moderate means now has in obtaining adequate medical service is the necessity for his going to so many different doctors who have separate offices,

so that, already sick, he wears himself out making many new, intimate, personal contacts, and exhausts his financial resources by paying many unnecessarily large bills. As a doctor practicing urology, which is a highly specialized branch of medicine, I am frequently confronted with the difficulty of persuading a patient to have a sufficient amount of medical work done to discover what is causing his genitourinary troubles.

A great deal of this could be overcome by having doctors coordinate their activities so that the same x-ray machine and laboratory could be used by a large number of doctors, instead of having a large number of x-ray machines and laboratories, each used by a few doctors. Consider, for example, the cost of the x-ray examinations of patients as compared to the amount of money which the physician charges for his services—an x-ray of a knee or some part of the body may very well cost \$10.00 or more, while it would be almost impossible for the ordinary physician to get a \$10.00 fee for riding even several miles to see a patient to make an examination of the same part of the body. I think that we have passed the stage where it is necessary to subsidize x-ray work, as it was perhaps in the beginning, and the medical profession must realize that there can be no reasonable excuse for most of the charges which are now made for many x-ray examinations. It is all right to subsidize x-ray work and air ship transportation in the beginning, but after they are developed such subsidies should be discontinued.

Take also the question of the costs of special nurses. Many times patients enter a hospital seriously sick, are operated upon, and before they leave have a nursing expense of from \$200.00 to \$600.00. Often they are barely able to pay the hospital expense, and more often they pay the physician nothing. It is bad enough for doctors to receive no compensation for services, but it is almost worse for a family to be financially disabled by such expenses for which there is no reasonable excuse. We need more practical nurses and fewer highly educated ones.

Why should laboratory costs be as great as they are? The only reason is that there is not a sufficient volume of work to pay for the operation of the laboratory without excessive charges. With fewer laboratories and each laboratory doing a far greater volume of work, it would be possible for patients to have all of the laboratory work which was necessary at a reasonable cost.

Another fault which Drs. Gaines and Beasley mentioned, is the failure of the state to share in the expense of the poorer classes of people. I am confident that it is absolutely essential that the state take over their share of expense and relieve the medical profession in a great measure of not only caring for the sick, but of supplying medicines, and paying for gas, oil, and tires out of their own pockets. But I can assure you that it is going to be impossible to get the state to share this expense, in a fashion most agreeable to us, by having medical societies pass resolutions



about the matter and having the resolutions published in the newspapers. Such publicity results in the development of a wide spread antagonism to the thing which the medical profession wishes to have done, for it is not possible for the laity to understand such statements or resolutions as "doctors will not supply medical service until they are assured of compensation of some type, either coming from the state or from the patient who gets the medical attention." The thing which we should have done is to get the medical profession to decide just what they want the state or counties to do about paying its part of these expenses, and quietly form an organization powerful enough to have its wishes effective when presented to the public and to those who control the distribution of the money of the state and counties. A solution of the whole problem of coordinated medical activity was offered to the profession by me a few years ago in a paper presented before this Association. If groups of doctors in towns and cities would get together and without forming closed organizations use the same x-ray equipment, laboratory, and even office space, they could, by proper administration, enormously reduce the cost of medical care for the patient, and at the same time increase their income.

DR. CHARLES C. HARROLD (Macon): I wonder how many of you have studied the reports of Sir Arthur Newsholme, under the Milbank Memorial Fund, dealing with the socialization of medicine in European countries. There are five or six volumes in the set. His last volume is intensely interesting, and to those who haven't read it and are interested, and of course we all should be interested, I recommend that you read it, and also the volume on the Scandinavian countries, with especial reference to Denmark. I think you will find the income of the doctors there will compare with those in Georgia. The people in Denmark get first class, satisfactory medical care and hospitalization. Of course a great deal of it comes from taxation.

I happen to sit on a bank board in Macon every week, with two men who are very rich. I am practically the only poor man on the board. I take pleasure in telling these gentlemen that they have accumulated money over a period of many years and we men who have not accumulated much money are rather enjoying seeing those who are being compelled to divide with those who have not.

We who are the thinking men in Georgia might as well have a test before us in this state, and it is a test of intelligently educating the public as to their responsibilities to pay. It is perfectly absurd, as Dr. Boyd has said, the poor medical care which is given in this state to poor people. It is because the state has not been instructed to pay its share for that care. I am thinking of the so-called charity cancer patients from outlying counties who require major surgical operations. At present the FERA pays me an operating fee of fifty dollars. I then have to give that fifty dollars to pay the hospital bill and either beg

more from friends or pay the balance from my own pocket.

The state of Georgia, or the counties around us which have no hospital facilities, should by some means be made to pay those expenses, and personally I think they should be made to pay the doctors who treat the patient. I may be getting too socialistic, but I think it is absurd for the butcher, the baker and the candlestick-maker to be paid dime for dime and dollar for dollar for everything they furnish for the care of the poor in the community, when the doctors are not paid a dime for it. I cannot see why the medical and surgical men and the hospitals in the cities should not be paid for what they do. Everyone who sells food and clothing, gas, heat, oil and food, is paid. I think we are approaching the time in medicine when the services given in so-called municipal and county hospitals should be paid for, and I think there should be rigid inspection of every man or woman who gets care in those hospitals. Of course a great many get free care who should not get it.

I am interested in the work which goes on in Atlanta. I hope that I am no prophet of evil, but I am afraid that unless you insure groups, rather than individuals, you are going to come out in the hole. If you take the school teachers in Atlanta, Macon or Augusta, and insure the group of teachers, or make a contract with them to practice, I think you will succeed. If you throw your scheme open to all school teachers, I believe those who will apply will be only those who are afraid they are going to have abdominal troubles or throat troubles or chest troubles that will need care within the next few weeks. I think the result will be that the group who are insured will get five times as much care as they pay for. But I think the profession at large is due a vote of thanks to the Fulton County Medical Society for taking the bull by the horns and having the courage to attempt something which all the rest of us have shunned.

DR. W. F. REAVIS (Waycross): I have been interested in this subject for a number of years. When I first began practicing medicine, I had about twelve years' work of an industrial kind, in what is known as contract practice. I know of no one that is better qualified to speak on a subject of this kind than one who has dealt with that class of patients over a period of years.

You are going to run into the same situation with the plan that the Atlanta physicians are now putting in, as we did back in those days. We had men who were in the healthy class, that Dr. Harrold has mentioned, who did not want to be assessed a certain sum of money per week or per month, or in any other form they might have for collecting the fee, because they said they did not get sick. Those who were of a more or less ill temperament made every effort they could to get employed by the companies offering this service. That is one feature of it, and I was very glad to hear Dr. Harrold mention it.

The principal thing I wanted to talk about was

county hospitals. The physicians in Ware County several years ago conceived the idea of building a county hospital. We worked on this scheme for a long time and introduced some special legislation, which we did not have in the state, permitting this, and after several attempts we succeeded in passing it. We then attempted to get a bond issue voted upon, and I do not think there ever has been a bond issue carried out properly. We carried this after the third attempt and obtained our hospital, which has been in operation now about two years. We have found that the plan worked very nicely, but we are getting back to the same problem of persons getting this type of service who are not entitled to it. The people are getting educated now and they are getting smarter than we are.

Dr. Harrold made the statement that in all of these cases there should be a rigid inspection made of the people before they are admitted to the hospitals for free service. That is fine but who is going to do it? It is impossible for any one human being in a county the size of ours to inspect or carry out the proper investigation of these patients for hospitalization. A patient is brought in with an acute condition, and you do not have time to make an investigation of that patient. It is an emergency and the person must be cared for.

This particular plan may not be entirely desirable, but it is far more desirable than anything we have had in the state or county as a whole, so far. If we are successful in having all of these cases well worked up before they are admitted, naturally we are going to have our charity lessened. It is the tendency of the American people today to get something for nothing, especially in medical work. Some patients will come into the doctor's private office in the poorest clothes they have, giving the impression that they are very poor. Recently a patient came into my office, and I was sorry for him and would have bought him a meal, but he pulled out some of those old greenbacks, the largest bunch of them I have seen in several years.

I tell you that we medical men have to blame ourselves for a whole lot of the depression that we are going through in this particular line, more than we can blame anyone else. If we will make patients pay us more, we will have more money and less patients.

DR. H. M. TOLLESON (Hahira): Gentlemen, I wish to introduce a slightly different line of thought concerning a problem which is very definitely related to the one which we are discussing. Its solution is more clearly indicated than the one under discussion.

Dr. Beasley stated, I believe, that in Atlanta there is one doctor for every 518 people. I presume that he had reference to doctors of medicine, as we speak of doctors. If a survey was made of the practitioners of the healing art in Atlanta, I wonder how many there are in relation to the population. I imagine, just roughly, that there is probably one practitioner of the healing art in the city of Atlanta, including

quacks, to every 200 or 300 people. I do not think that is a radical estimate. We say there is an overproduction of doctors. We are worried about the quantity of doctors. I think we should worry about the quality of the practitioners of the healing art. The solution of this problem lies in an intensive interest and effort on the part of the medical profession to influence our legislators in enacting proper legislation to correct this evil. What I am going to say is possibly in bad taste. I apologize to those who think it is. I stated this before the House of Delegates yesterday.

There are seven states in the United States who have basic science boards. These seven basic science boards in 1933 examined 800 applicants. Of those applicants examined, of medical students and doctors, 11.5 per cent failed to pass; of osteopaths, 33.8 per cent failed to pass; of chiropractors, 83.6 per cent failed to pass; of a group which were unclassifiable, all failed to pass.

Why can't people pay the doctor? One reason is because millions of dollars are being paid for Lydia Pinkham's compound, and other such things, and to the various cults. If this money was turned into proper channels, the medical profession would be in a position to give better service to these people and it is hard to say who would benefit the most, the medical profession or the patients.

DR. GEORGE B. SMITH (Rome): I believe that this Association is composed of men who live in Atlanta and other cities and we who live in the country. It seems to me that these doctors in the city are now experiencing what we in the country have experienced for a long time, and that is hard times. It seems to me that they are making the State Medical Society get their chestnuts out of the fire.

Personally, I am opposed to the socialization of medicine. I think that if you fellows in Atlanta have your problems, you should solve your problems. If we who live in the country have our problems, we will solve our problem.

It was Mark Twain, I think, who said, "There is a lot said about the weather but nobody does anything about it." All this talk about medical economics is just "bull." We are not going to do anything about it. We meet, talk, go home and cuss, and it is all the same. If you socialize medicine, you are going to put the young doctors who are coming on, in the same position that the school teachers are now in.

I just want to register my protest. I hope I have not hurt your feelings.

DR. LEWIS M. GAINES (closing): It is impossible to talk for twenty minutes and present a subject that has excited as much comment as this has. I shall not attempt to defend or otherwise comment on the situation, but I feel that in Atlanta we are not trying to show up a country doctor at all. And furthermore, we have had hard times there for a long time, con-



trary to what has been the general impression. We are not a bunch of rich doctors in Atlanta, by any means.

We feel that it is a duty that we have to let the doctors of the state of Georgia know what we are doing in Atlanta, in an effort to solve this problem.

It has just been said that there is a lot of talk about it which doesn't amount to anything. We thought it was better to try to do something constructive.

## THE IRRITABLE COLON\*

J. D. GRAY, M.D.

*Augusta*

The colon is the most treated as well as the most mistreated organ of the body—by both the medical profession and the laity. Other organs may be at fault but the attack is made on the colon. Dr. Spriggs says that "the colon had been abandoned by Metchnikoff as a useless relic, stormed by half a generation of enterprising surgeons who removed large pieces, or, when most merciful, stitched it in its presumed place, laved with many waters by physicians, and dosed by the public; it had been and still was a battlefield with long drawn out onslaughts and retreats, the Flanders of Medicine."

Barber, in speaking of the functions of the colon, says:

"The colon is not meant to be completely empty, if it be emptied of solid material it tends to fill with flatus. The functions of the colon are the passage of food residues, and the absorption of water from its proximal part. So we do not regard the colon as just a drainage pipe which should be scoured out to keep it as clean as possible; nor is it sound doctrine to hold that a modern civilized diet turns it into a valueless organ which may be removed by the surgeon."

In recent years gastro-enterologists have placed conditions heretofore described as mucous colitis, spastic colitis, spastic constipation, intestinal neurosis, and nervous diarrhea in the more comprehensive category of irritable or unstable colon.

We don't like to use and shouldn't use the term "colitis." In many cases it seems the easiest way out because there is something about the term colitis that is satisfy-

ing and soothing to the patient. There is no argument when a physician tells a patient she has colitis but if he tells one she has an irritable colon there is a long discussion and the patient leaves rather dissatisfied. Munthe, in "The Story of San Michele," tells us how appendicitis was used to soothe the troubled minds of certain fashionable Parisian society women. This was quite satisfactory until they learned that American surgeons were removing the appendix and it was then necessary to find another word that would suit just as well. Imagine his happiness and pleasure on seeing the faces of his patients brighten when he told them they had colitis.

The irritable colon is, with few exceptions, a functional or nervous disorder. It is certainly not an inflammatory condition but an inflammatory condition in the gall-bladder, appendix, etc., might be the precipitating factor. The patients are usually of the nervous type. They have other symptoms of nervous imbalance—they are emotional, may have choking or globus, cardio-spasm, pylorospasm, or other symptoms that are usually attributed to nervousness.

The most common cause of irritable colon is cathartics and colonic irrigations. These have been used because of the existence of spastic constipation. How many times have most of you had to listen to the tales told of the enormous quantity of mucus passed by catharsis or irrigation? No doubt these patients will continue to pass mucus so long as they continue to use these things.

Most of the patients are thin. They are of the asthenic habitus, and have varying degrees of visceroptosis. Due to fear they have gradually dropped articles of food from their diet until at times they may be living on skimmed milk and toast. Many that might have had a normal weight in the beginning of their illness have lost weight to the point of exhaustion. This in itself aggravates the symptoms and they find themselves in a vicious cycle—the less they eat the worse they feel and the worse they feel the less they eat.

It is common to give a purge in the beginning of most acute infectious diseases. Not infrequently patients tell you that the dis-

\*Read before the Medical Association of Georgia, Augusta, May, 9, 1934.

tress began after vigorous catharsis, after operation, during puerperium, or in the beginning of an infectious disease. It is also a habit with many people to take a different cathartic every night. I have actually had patients tell me that they took calomel one night, Hinkle's pills the next, caroid and bile salts the third, alophen pills the fourth, castor oil the fifth night, and salts the sixth night. This, in some instances, was not the patient's own wish but the advice of a physician. Can there be any excuse for such medication? I think not. Is it any wonder that patients tell us that this or that laxative has lost its effect? The laxative has not lost its effect; the fault is that cathartics, enemas, and irrigations aggravate and perpetuate colon malfunction.

Let me call your attention to a statement by Alvarez. "I sometimes liken the colon to a short railroad siding with three freight cars on it. Every day a new car comes down and bumps one off on the other end so that three always remain. Imagine now a car coming down so fast that it bumps all the cars off and leaves the siding empty. The result would be that for the next three days the track would be filling, and no car would be bumped off the end. The practical point is that a patient should not expect to have a bowel movement for two or three days after being purged. It should be remembered that it is not necessary for every person to have a movement every day in order to stay well."

Whatever the cause there is an imbalance between the nervous and muscular mechanism which results in a disturbance in the mechanical and secretory functions of the colon. This imbalance is precipitated by worry, nervous strain, excessive physical or mental effort, insomnia, unhappiness with their lot in life, family difficulties, tobacco, and liquor.

The three main functions of the colon are upset. The upset of the motor function leads to delayed or increased motility; the upset of the secretory function leads to increased or decreased amount of mucus in the stool and an increased or decreased absorption of fluid; and, third, there is imperfect digestion of cellulose. Consciousness of the

abdomen is commonly complained of. This may be a simple discomfort after eating, a distention of the abdomen, or there may be actual pain. The pain may be crampy or colicky in nature, may occur in paroxysms, or may be constant. It is rarely so severe as to require opium. The pain may occur anywhere in the abdomen. It should be remembered that one segment of the colon may be irritated while the rest of the colon remains in a more or less normal state. This may result in pain in the sigmoid area, in the epigastrium, due to spasm in the transverse colon, in the right upper or lower quadrant, or in the left upper quadrant. The pain in these regions may simulate carcinoma or diverticulitis if in the iliac fossa, heart disease if in the left upper quadrant, peptic ulcer if in the epigastrium, gallbladder disease or appendicitis if in the right side. Due to the fact that ingestion of food initiates peristalsis throughout the alimentary tract pain is likely to occur after eating. There may be constipation, diarrhea or alternating attacks of constipation and diarrhea. During the constipated period the pain is usually a dull ache, during the diarrhetic period there occur severe paroxysms of pain. There may be relief of the pain by passing gas or by a bowel movement.

It is needless to say that appendectomy is done on many of these patients without relief of symptoms.

Many suffer from the poorly understood but often used diagnosis—"autointoxication." This alone is responsible for catharsis to a great extent. There is some evidence that if there is an increased absorption of noxious products, it is from the small intestine rather than from the colon. A normal mucosa would be a barrier to such absorption so this is an additional reason for not giving cathartics.

In addition to the symptoms related to the colon there are frequently found other symptoms of neurogenic origin. These patients fall in the class of spasmogenic aptitude. They consider it a virtue to belch. This may be explained by a desire for sympathy and many people consider it a sign of severe indigestion when they hear one make a loud noise when they belch. There is often



some relief by belching, probably from the dilatation of the cardia which is in a state of spasm. Another very common finding is the daily, or more often, consideration of the size, amount, and consistency of the stools. Many patients have a feeling that they have not had a satisfactory movement even though they may have had from one to three movements during the day. Other nervous symptoms are intolerance of the presence of crowds, headache, vertigo, coarse tremor of the hands, breathless awakening at night, chewing of finger nails, fainting at work, nausea, rapid talking, weakness, fatigue and palpitation.

The history is the most valuable single method we have in making the diagnosis of irritable colon but the x-ray gives valuable support.

The barium meal and the barium enema should both be used, in a single case. If for any reason both cannot be used the barium meal will give more information than the enema. An observation of the colon nine hours after the barium meal is most important. The pictures may show the barium has proceeded faster than normal showing irritability, or slower progress showing stasis. A strikingly constant finding is stasis in the terminal ileum. This is thought to be due to a spasm of the ileocecal sphincter. There may be a complete loss of the haustra causing a ragged, twisted, or distorted appearance of the fecal column. Often there is found an irregularity in the size, shape, and spacing of the sacculations. The picture is occasionally one of a thin streak or mottled line. Another picture of hypermotility is the production of filling defects or the widespread breaking up of the fecal column. One of the most constant findings is the presence of an increased amount of gas in the colon.

The most common evidence of irritable colon with the barium enema is the increased speed of passage of the enema. Also there is a decrease in the amount of fluid necessary to fill the colon. A normal colon requires 40 oz. but in colitis less than 32 oz. are needed.

There may be found also the same findings as with the meal but usually not so pronounced. The colon often shows a smooth

appearance or ironing out of the haustrations. Care should be used here in interpreting this phenomenon as it is also found in normal colons after enemas.

The sigmoidoscope gives some information that is of value. This information may be negative rather than positive but it does help to rule out organic disease. It is often difficult or impossible to pass the sigmoidoscope due to the extreme spasm of the sigmoid segment. It is often possible to reproduce the pain the patient has complained of by manipulation of the instrument or by inflating the colon with air.

The treatment should be directed to the patient rather than to the colon. It is the failure to realize that we are dealing, in most instances, with a disorder of the nervous system, which disorder directs itself to the colon, that causes many failures in treatment.

We all know that fear is constant in these patients. They are afraid of cancer, afraid to eat, afraid their bowels will not move every day, and some give you the impression that they are afraid they will get well. Needless to say, a complete study of the patient, and a complete study of the gastrointestinal tract, should have been made in order to relieve the minds of the patient about cancer, etc. It is rather disconcerting to both doctor and patient to learn, after the patient has been told he has a functional disorder, that he has cancer or ameba.

Nothing is of more benefit than rest. It may be necessary to put the patient to bed constantly, even to hospitalize her. On the other hand, a few hours up may be permissible. Attention should be especially given to having the patient sleep. Some of the barbiturates are perhaps the best to use for this purpose. Most people will not take enough hypnotics rather than take too much. Sedatives should be used effectively or not at all. There is very little danger of habituation. Relaxation, both mental and physical, is necessary during the acute stage and should be practiced at other times as well.

The patient should abstain from anything that seems to produce attacks. This may mean absence from teas and bridge parties and picture shows. All sources of worry should be removed as far as possible. Rest periods at a

definite time of day should be insisted upon. A very definite plan should be mapped out rather than vague suggestions as to things the patient might do.

The diet is very important. The time honored argument over a rough or a smooth diet is not debatable here. I think the smooth diet, as suggested by Alvarez, is a very good one, or a diet avoiding raw vegetables and fruits, coarse cereals, fruit with seed, coffee, tea, cocoa, carbonated drinks, and alcohol beverages may be sufficient. It is most important to see that these patients get sufficient calories. It is easy to make up a large number of calories in butter, cream, and oils. It is not very difficult for a patient to eat a stick of butter (1-4 pound) daily. This would amount to about 900 calories and wouldn't add bulk.

After the patient has been instructed in the treatment of herself as a whole, one can give some instructions in regard to the colon. I think this should be last because in this way less stress is placed on the colon. Purgatives and laxatives are prohibited. If the fecal particles are dry and hard, mineral oil may be used. It should be explained that the bowels should act without assistance and a normal habit can be established even if for months or years every action has been in response to a purgative. I cannot impress upon you too strongly that aperients aggravate this condition. It may be necessary during the first week or two to allow a small enema or a retention enema of oil two or three times. When it is found necessary psylla seed and agar may be given to add bulk to the feces without harmful effect.

Some drugs may be found necessary in the beginning but should be discontinued as soon as possible. Belladonna or atropine as an antispasmodic may be employed. I find better results are obtained with the judicious use of chloral hydrate. Often four to seven grains three times daily will relax a patient most satisfactorily.

Patients with irritable colon are frequently seen. They are usually weak both mentally and physically and are often very ill. They lay particular stress on the abdominal symptoms but it does not take one long to see that the main thing is the nervous condition.

They are often very difficult patients. They resist every effort of treatment, particularly when it is apparent to them that the treatment is not directed to the colon. It should be clear that it takes time and patience to cure these patients. Even then misunderstandings occur and we find patients shopping around with doctors. They want medicine, they depend on medicine, and are hoping to find someone who will treat the colon rather than the patient.

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*Discussion on Paper by Dr. J. D. Gray*

DR. JAMES E. PAULLIN, (Atlanta): Dr. Gray in his excellent paper has stressed so many important points in the diagnosis and treatment of irritable colon that it is extremely difficult to settle upon any one particular feature on which to center the discussion, however, because of the frequency of this symptom complex it has occurred to me to confine my remarks to one feature of his paper: i. e. that of pain.

In a patient with an irritable colon the most common symptom of which he complains is pain or abdominal discomfort. The intensity of this pain may vary from severe cramps to gaseous distention and discomfort, most commonly associated with eating. Along with this there is either an obstinate constipation or an intermittent diarrhea. There must be, of course, some reasonable explanation for the causation of this pain.

We know that the colon is supplied chiefly by the sympathetic and parasympathetic nervous system. We also know that the colon as a general rule is insensible to stimuli which produce pain when applied to other parts of the central nervous system; that is to say, the colon can be pinched, cut, mashed or burned without producing pain. Stimuli which ordinarily produce pain in the colon are either traction on the mesentery, spasmodic contraction or sudden distention of the colon. These stimuli are entirely different from those which ordinarily produce discomfort when applied to the external body wall. A close relationship exists between the central nervous system and the autonomic nervous system. This relationship is expressed in various anastomoses that take place between the two so that when a stimulus of sufficient severity to cause discomfort is applied to the colon it is usually referred to the anterior abdominal wall. In patients with an irritable colon it is entirely possible that this portion of the alimentary tract is more susceptible to painful stimuli than other parts of the body so that these persons experience more pain from a mild stimulus than the average individual.

Dr. Gray in his paper was quite careful to bring out the important fact that no individual should be classed as having an irritable colon until all possible organic lesions of the bowels sufficient to produce pain had been eliminated. It is not an uncommon observation to see patients with abdominal pain who have been subjected to various surgical procedures in



an effort to eliminate this pain and without much success. Some of these patients do not complain of much discomfort afterwards although the discomfort still exists since they have had some of the fear removed from their make-up by an appendectomy. This whole question boiled down to the last analysis means that one should study his patient most carefully in order to properly evaluate his complaints.

DR. LEWIS M. GAINES (Atlanta): There are one or two points I should like to bring up in connection with this paper. One is the problem of gas, abdominal gas. Very frequently this problem is met by the use of purgatives. Alvarez showed some years ago that there is an interchange of gas between the lumen of the bowel and the blood stream, and that in nervous states there very often occurs a blanching of the blood supply to the gut, in this case through the colon, we will say, so that it is impossible for this interchange to take place. Hence there is an accumulation of gas in the lumen of the bowel.

It has often been possible to trace the occurrence of gas to highly emotional states, fear, particularly, and I have come to the conclusion that when surgeons are disturbed so much by the occurrence of gas in their patients, it is because of fear and emotional disturbance brought about by the procedures which the patient naturally dreads.

One other point that I should like to make is the fact that we have two types of purgatives, two main types. One of these is the irritating purgative. Why do so many purgatives act at all? They act because they irritate the lumen of the bowel, and the body then makes an attempt to get rid of them by contraction. The other type is the pure lubricating type, and these patients should have only the lubricating type of purgative.

It seems to me one of the most pernicious types of drug we have is the drug phenolphthalein. So many of these patients have constipation of the spastic type, and we are adding fuel to the flame.

It seems to me very few nurses and orderlies in hospitals know how to give enemas. They distend the colon with large amounts of water, and I have seen some patients have five gallons of water passed through their colon. One can imagine the results of the distension of the bowel in this manner. A glass of water, frequently just allowed to flow in and directly out of the rectal pouch again, will bump off that last freight car efficiently.

DR. FRANK K. BOLAND (Atlanta): Dr. Gray mentioned the fact that these cases of colitis which occur, as I understand it, usually in nervous people, should be studied so as to be certain to eliminate the possibility of any organic disease being present before they are put down as cases of irritable colon. I think this point should be emphasized, because it is possible for a nervous individual, with various kinds of nervous symptoms, to have organic disease as well as disease due to his nervous condition.

Dr. Gray spoke of some patients who complain of

incomplete stools, who have two or three stools a day but feel that the bowel is not emptied. This is the very kind of a symptom that often is an early symptom of carcinoma of the colon, particularly of the sigmoid, so that we should be sure to rule out any possibility of organic disease before making a diagnosis of simple irritation of the colon.

We have incomplete stools, the change of bowel habits in the person who has had established bowel habits for years. If such a person is left until he has anemia, weakness and emaciation then our diagnosis is too late. We too frequently get these cases of carcinoma of the colon only when it is possible to do nothing but a palliative operation. If we had them earlier, when they first showed signs of a changed bowel habit, we might catch some cases of carcinoma of the colon soon enough to do them some good.

DR. DAN Y. SAGE (Atlanta): I merely wish to make one remark for you men who are having trouble with postoperative distension of the colon. This method has been used for years, and is overlooked by a good many now. If you will insert a 28 catheter in the rectum, attach it there for three or four days, some of your patients would not swap it for a million dollars.

DR. M. C. PRUITT (Atlanta): I did not expect to discuss this paper, but I think it is important to emphasize the importance of being sure that we are not dealing with some local or constitutional condition.

I am not denying that there is such a thing as an irritable colon, but to classify a patient as having an irritable colon, when he has some local or constitutional disease, is a very serious factor. Many of these cases that are classified as irritable colons would probably be better classified under some other group, if we knew the definite etiologic factor.

I want to particularly emphasize the simple lesions that involve the terminal portion of the bowel. A fissure in ano is a very small, minute lesion. There is probably no other lesion within the body that can give more constitutional nervous manifestations than a fissure in ano. Many of these cases last for months, and many of them recur from time to time, particularly when there is a constriction of the anal outlet, and they have this irritable colon with the alternating changes of bowel habit, abdominal pain and "gas," which offers the background for the continuing keeping up of these local conditions.

Another point which is not commonly thought of is cryptitis. Frequently you see, when examining the terminal bowel, such a focus of infection. If you saw such a lesion on the gums, you would make a big display about it. Many times you find the same bacterial flora as you find in the oral cavity. This irritation produces nervous manifestations that may be classed as an irritable colon. A reflex condition which produces constipation from the lesion, irregular habit of bowel movement, the constant dread of the dis-

comfort, frequently produces symptoms which may simulate an irritable colon.

I wanted to emphasize the common lesions since Dr. Boland mentioned carcinoma. We would all like to cure the carcinoma cases. They are few compared with the large number of cases that are handicapped by such chronic infections that are carried on by the local lesions in the terminal bowel, giving constitutional nervous manifestations which are being classified in many cases as unstable colon, irritable colon, colitis and neurocolitis, and various other terms mentioned in the medical literature of today.

DR. W. R. DANCY (Savannah): Dr. Gaines spoke of surgeons being disturbed or irritated by gas in their patients, but he overlooked the fact that gas in the surgeon often irritates the patient.

I want to lay stress on this particular point, that reference to pathologic lesions in the colon has been referred to solely as a malignancy. There may be lesions in the colon due to infectious processes, and there may be lesions there due also to mechanical processes, which brings up the point of diet and of laxatives.

The diet in these cases must be of a bland nature, as heretofore mentioned, and we should all learn to discontinue our irritating laxatives. These produce spastic conditions, and most of the spasticity comes in the lower segment of the colon, which in turn dams back the contents of the colon into the cecum, and when distended it produces pain and discomfort which is so often mistaken for appendicitis.

DR. WILLIAM R. HOUSTON (Augusta): Frequently in medical discussion the discussion wanders off from the subject being considered. We are talking about the irritable colon. To keep to the subject we dismiss all the conditions from our consideration that are not included under that head, such as cancers, hemorrhoids, and so forth.

A main issue is how frequent is this condition we speak of as the irritable colon. It is a very frequent thing, one of the commonest syndromes that is met in daily practice. The causation of it is not difficult and obscure; it is due most often to faulty habit formation, usually in early life, to carelessness and haste; it occurs in persons of an asthenic habitus, of an irritable temperament. It is often iatrogenic (doctor-made), provoked by unwise use of cathartic drugs.

It is just as well to go back to the original paper, which I think was a very sound and sensible presentation of a very common fault in medical practice. If we allow ourselves to be led astray from the very frequent situation of an irritable colon, into treating patients for "autointoxication" or what not, for things that have no bearing on the real situation we miss an important therapeutic opportunity. The problem is the patient's general personal hygiene, way of living, vigor of constitution, degree of nutrition. When the emphasis is put on the right place, we can avoid doing the patient harm, as we so often do; we can

avoid treating him for what he has not; we can render him an invaluable service.

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## HYDROCHLORIC ACID TREATMENT IN MONOXIDE POISON

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### Case Report

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HOMER L. BARKER, M.D.  
Carrollton

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A general construction worker, aged 46 years was brought to my office, where he was seen to be dyspnoeic, cyanotic, and suffering from generalized muscular twitching; apparently bordering on convulsive seizures. Blood pressure was systolic 164, diastolic 92.

His foreman stated that the patient had been operating a gasoline motor, used to hoist materials, almost directly over the exhaust pipe all day. It was a very damp, still day with practically no air stirring and the motor almost closed in on three sides. Patient stated that he felt rather badly at noon time, but after the noon hour he felt much better and did not notice any unpleasant symptoms until about four p.m., when he felt "sluggish and some headache"; the foreman stated that soon after four, patient rather "crumpled" in his seat and let the beam fall and when reached he was almost unconscious and could not give any reason for his condition.

Upon arriving at the office the patient was placed in a recumbent position and given morphine and atropine, with no improvement noted in his condition for a period of twenty-five to thirty minutes. The patient stated that he might "feel a little better." A 10 cc. ampules of a 1 to 1500 solution of hydrochloric acid was given intravenously with marked improvement noted within the next five minutes. Within fifteen minutes the patient stated he felt much better; and at the end of twenty-five minutes the systolic blood pressure was 132, cyanosis had cleared up, dyspnoea had disappeared, twitching completely subsided and the patient stated he was "ready to go."

This case is reported in order that others who have similar cases might give this treatment a trial. This type of accident is greatly on the increase; it being reported that of all accidental deaths in 1933 there was a greater increase on a percentage basis from carbon monoxide poison than any other one cause.

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The experiments of William H. Woglom and Lawrence A. Weber, New York (Journal A. M. A., April 21, 1934), with sixty mice indicate that deuterium, in the amounts that it was possible to administer as "heavy water," had no demonstrable effect on the growth of mouse sarcoma 180 or mouse carcinoma 63. In order to be certain that the deuterium had been absorbed by the mice and by their tumors, the proportion of deuterium to normal hydrogen in the water that these contained was determined by measuring its refractive index.



## SOME GENERAL CONSIDERATIONS IN TREATING THE ACCESSORY SINUSES OF THE NOSE\*

G. H. LANG, M.D.

*Savannah*

Rhinologists for a long time have been aware of the various diseases to which the accessory sinuses of the nose might fall heir, and have given relief to their patients suffering from affections in these areas. However, it has remained for the modern conception of focal infection, to attract the attention of the profession as a whole to the important role played by them in relation to the health of the individual. Along with infected tonsils and apical abscesses of teeth, toxic absorption from the intestinal tract, etc., these air pockets, when chronically infected, occupy an unquestioned position in affecting the health of other organs and the general well being of the individual. Such conditions as neuritis, arthritis, cardiac, renal and bronchial disturbances, affections of the eyes, diseases of the ears, and many other conditions may be directly traced to sinus trouble. If, then the sinuses are an etiologic factor to be reckoned with in such a variety of ailments, a few minutes spent in reviewing their anatomy, physiology, pathology and treatment may be of interest to all.

Anatomically the accessory sinuses of the nose are a group of air cells lined with mucous membrane, placed adjacent to the lateral walls of each nasal cavity, and being in direct contact with the nose through their normal openings into the grooves between the turbinate bones which form a part of the lateral walls. Although they are lined with the same type of epithelium and serve the same physiologic purpose, they vary in shape and size and location, and have been named the maxillary sinuses or antra of Highmore; the frontal sinuses, the ethmoid cells, and the sphenoids.

### 1. *Maxillary Sinuses:*

These are two in number, one on each side of the nose, occupying the body of the superior maxilla. They are pyramidal in

shape and each has its base in the lateral wall of the nose, while its apex is formed by the outer extremity of the malar bone. It varies in size and shape in different individuals, and is somewhat larger in males than females. It is present, but very small, in the new born and attains its full development at about the fifteenth year. It opens by one or more ostia into the nose in the groove between the middle and inferior turbinates. Since these openings are higher than the floor or bottom of the sinus, it must drain upward, which accounts for the fact that once infected, this cavity rarely clears spontaneously.

### 2. *Frontal Sinuses:*

There are two frontal sinuses, a right and a left, separated by the median partition which corresponds to the sagittal suture of the head. They also are pyramidal shaped cavities which are placed between the inner and outer tables of the frontal bones. The outer table forms the orbital ridge, while the inner table forms the bony support for the lobes of the brain. The cranial wall composed of compact bone is about 1 mm. thick. The floor of the cavity is the roof of the orbit, and at the posterior internal angle of the pyramid is the outlet of the sinus known as the frontonasal duct, which extends into the hiatus semilunaris, and out into the middle meatus of the nose. The frontal sinus is not present at birth, but makes its appearance in the orbital plate between the end of the first and beginning of the third year, and up to the sixth or seventh year reaches only the size of a pea.

### 3. *The Ethmoid Sinuses:*

These sinuses are a group of cells numbering from two to six, embedded in the body of the ethmoid bone. They are divided into two groups, the anterior and the posterior and vary widely as to size. The anterior group empties into the middle meatus, and the posterior cells find an outlet into the superior meatus of the nose. Their entire inner wall is overlaid by the middle turbinate and the middle meatal wall. Their outer wall is formed by the inner wall of the orbit, and they extend anteriorly to the inner canthus of the eye, and posteriorly to the sphenoid cavity and sometimes even around it. These cells are also not present at birth, and

\*Read before the Medical Association of Georgia, Augusta, May, 9, 1934.

develop simultaneously with the frontal sinus.

#### 4. *The Sphenoid Sinuses:*

This is a quadrilateral cavity in the body of the sphenoid bone with a medial partition which divides it into two unequal portions. The sinuses vary in size, the left being larger in the majority of cases. They may be so small as to hold only a drop of fluid, or large enough to hold  $2\frac{1}{2}$  drams. On their surfaces and walls are many important structures, as dura, optic chiasm, pituitary body cavernous sinus and internal carotid artery. The ostium or natural outlet of the sinus is near the upper border of the anterior surface. In the vast majority of cases the orifice cannot be seen until the middle turbinate has been removed. At birth the sphenoid sinus is but a faint depression in the cancellated tissue of the body of the sphenoid bone.

It can readily be seen from this brief anatomic review that infection in each sinus offers its own peculiar problem. One should have a clear conception of their location and natural openings in order to treat them intelligently.

Physiologically not much is known about the sinuses. Many theories have been advanced regarding their function, and even at present, many authorities will hold almost directly opposite views as to their significance. Quoting from Skillern's text book, four of the most probable theories which have been advanced from time to time are given:

I. That they are remains of certain rudimentary structures which in lower animals serve as important adjuncts to the sense of olfaction.

II. An adjunct to olfactory function by evenly distributing the inspired air in the olfactory region.

III. To lighten the bones of the skull so that proper balance may be maintained.

IV. They serve as an adjunct to respiration, moistening the inspired air.

The older theories that they imparted resonances to the voice or secreted mucous for the purpose of keeping the nasal chambers moist have been disproved.

Since the sinuses are in direct contact through their various ostia with the nasal mucosa and the nasal cavities constantly harbor pathogenic bacteria, it would seem that the sinuses should be always a habitat for such organisms. That such is not the case

was proven by Torne, who demonstrated that the healthy sinuses of cadavers which had not been dead for more than two hours were without exception sterile. The same worker went a step further and showed that the reason for this was the action of the ciliated cells lining the air cells. He took the heads of freshly slaughtered calves and opened them in such a manner that the nasal wall of the maxillary sinus with the ostia was exposed. Small portions of lampblack were strewn over the mucosa of the sinus, and the results watched with a strong reading glass. The lampblack particles were seen to move toward the ostia and disappear into the nose. The speed became less and less and finally at the end of about two hours there was no motion at all. Torne then carried his experiments further still in order to see whether or not the normal secretion of the maxillary sinus has any germicidal action. Under aseptic conditions he gently scraped the antral mucosa of a fresh cadaver with a dull curette, thus obtaining a small amount of mucoïd secretion. To this was added a freshly prepared growth of anthrax bacilli. After some eighteen experiments it was conclusively proved that the secretion possessed a decided inhibitory action on the growth of the micro-organisms.

Suppurative inflammation of the sinuses is the direct result of bacterial invasion, but whether these micro-organisms act primarily directly on the healthy mucosa or whether they require that the vitality of the mucous membrane first be lowered by some systemic disease, appears to be more or less of a mooted question.

Various organisms have been found in infected sinuses. The predominating ones are the staphylococci pyogenes, aureus, citreus, and alba, various streptococci, pneumococci, micrococcus catarrhalis, while dental organisms, coliform bacilli, obligate anaerobes, diphtheroid bacilli and others have been reported.

Cultures taken from an infected sinus are rarely pure. One usually finds a mixed infection and frequently three to five distinct organisms can be isolated. This makes it almost impossible to develop a vaccine which would prove of value in sinus infections. We



have seen the intimate relation which exists between the sinuses and nasal mucosa, and can appreciate how easy it is for them to become infected. Indeed one marvels that anyone afflicted with acute rhinitis can escape sinus involvement. That such infections occur much more frequently than suspected is often proven in the rhinologists practice, when during a routine examination one or more groups of cells are found to be chronically infected.

The normal histology of the lining membrane of all the sinuses being practically the same, the pathologic changes which take place in any one of them is identical with any other one. Study under the microscope of a cross section of the bone and mucous membrane of the antrum for instance, shows that it is made of ciliated epithelium similar to that found in the respiratory portion of the nose and a subepithelial layer of blood vessels and glands so intimately connected with the periosteum that it is impossible to distinguish a dividing line.

The pathologic changes which occur in the course of purulent inflammation depend on:

1. The length of time the disease has progressed.
2. Virulence of the attacking organisms.
3. Resistance of the sinus to the disease.
4. Favorable or unfavorable drainage conditions.

Due to the unfavorable situation of its ostium, the maxillary sinus usually shows the greatest pathologic changes. When the mucous membrane first becomes infected an intense hyperemia and swelling results, due to the outpouring of serum into the submucous layer. The swelling encroaches more and more on the cilia, causing them to wave more and more slowly until finally their motion ceases altogether. As the cilia become motionless the mucosa is no longer able to throw off the secretion which is forming and the cavity begins to fill with an inflammatory exudate composed of serum, mucus, leucocytes and exfoliated epithelium. The exudation in the beginning scanty, becomes more profuse and changes from a serous to sero-sanguinous, and later a mucopurulent discharge, or resolution may now set in with a gradual reduction of hyperemia and edema.

If recovery cannot be brought about in from four to ten weeks, the disease then becomes chronic.

The character of the secretion is no index as to the condition of the sinus mucosa. It may be profuse, fetid and of a greenish color, while the mucosa shows but few and even insignificant changes, and again it may be serous and scanty, and yet the entire sinus may be filled with hyperplastic and cystic degenerated mucous membrane. These apparently anomalous conditions are explained by the kind and virulence of the infection, for it appears that the infecting organisms act principally on the epithelium and do not penetrate into the depths of the mucosa.

The diagnosis of sinus inflammation although usually a comparatively easy procedure may at times be difficult. The classic symptoms in acute cases are headache, tenderness in the region of the sinus affected, general malaise with fever, nasal discharge, and impaired nasal breathing. In acute exacerbations of chronic involvement, the same symptoms may be present while in chronic cases there may be no local disturbance sufficiently marked to cause the patient to suspect trouble in his nose.

The headache resulting from sinus disease although one of the most frequent symptoms is sometimes least understood. As an individual symptom indicative of disease of a particular sinus it is thoroughly unreliable, but its presence or absence in the symptom complex is most important. The cause of headache depends on one of several conditions:

1. Swelling of the mucosa with pressure on the nerves.
2. Direct contact of the swollen mucosa.
3. Negative pressure in the sinus.
4. Stasis following obstruction to drainage.
5. Reabsorption of toxins formed within the sinus.
6. Disturbance in the blood and lymph circulation at the base of the skull.

The character of headache varies from a dull heavy feeling to a sharp neuralgic pain. In acute inflammations it is usually severe in type, while in chronic cases it varies widely. Not infrequently the headache manifests itself at a certain time of day, lasting for a few hours, disappearing suddenly to return

at the same time the following day. In certain other cases of chronic disease the patient may be relatively free from discomfort for days and even weeks at a time.

In any suspected case one should first of all make a thorough painstaking rhinologic examination; shrinking the mucosa with cocaine and ephedrin or epinephrine and looking for the appearance of pus under the middle turbinate.

Should pus be found anywhere along the hiatus semilunaris, one may feel reasonably sure that he is dealing with an infection in one or more of the anterior group of cells, the antrum, anterior ethmoids and frontal sinus; while pus appearing in the nasopharynx is most probably coming from the posterior ethmoids or sphenoids. The use of the nasopharyngoscope is often a valuable aid in determining just where the secretion is coming from. The patient is taken into the dark room and subjected to transillumination. This consists in putting an especially constructed electric lamp in the patient's mouth and observing whether the light reflex is the same over each antral region. When there is a decided shadow on one side or the other, one suspects antrum disease. In a similar manner the frontal sinuses are investigated. Transillumination, however, gives no information as to the state of the ethmoids or sphenoids. No examination or investigation of the sinuses can be said to be complete until a study of them is made with the x-ray. Used at first merely as an agent to ascertain the size and contour of these cavities, the roentgen ray has come to occupy a very important part in determining pathological changes in them.

Treatment of the accessory sinuses of the nose consists of local and general measures, surgical and non-surgical, and varies widely, depending upon whether one is dealing with an acute or chronic case, whether the patient is neurotic or phlegmatic, and whether the case is one of simple infection or threatened with grave complications. In acute cases local measures are used which will secure and maintain drainage, allay inflammation and thereby secure comfort for the patient. In the light of Torne's experiments quoted above, it can be readily understood why it is essen-

tial to keep the ostia open. If this can be done, most acute disturbances will begin to abate in from twenty-four to forty-eight hours, and clear entirely within a few days. Hot saline douches, steam inhalation of menthol and compound tincture of benzoin and sprays or drops containing ephedrin sulphate usually bring about the desired result.

General measures indicated are a brisk saline or calomel purge, rest in bed, regulation of diet, aspirin, or one of the coal tar derivatives to control pain, and hot or cold application to the forehead or temples. Vaccines and non-specific protein therapy in some cases apparently do much good while in others they are disappointing. Should such attempts fail to bring relief, one must of course resort to surgery. This may vary from a simple antral puncture or resection of the anterior one third of the middle turbinate to a radical exenteration of any one or all of the sinuses on one or both sides of the nose.

Acute inflammations, however, rarely require radical surgical interference. It is in the treatment of chronic cases that surgery is productive of most good. If a patient presents himself for treatment, giving a history of sinus infection over a long period of time, showing a profuse nasal discharge coming from one or more of the cavities, with water logged turbinates or polyps, springing from the floor of the hiatus semilunaris, and the x-ray findings confirm the diagnosis, it is obviously futile to temporize with sprays and douches. Some form of surgical interference is necessary and it only remains to decide on how simple or how radical the procedure must be.

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*Discussion on Paper by Dr. G. H. Lang*

DR. ARTHUR G. FORT (Atlanta): I know of no subject which is of greater interest to the general practitioner and the public than this subject sinus infection. There is one point which I particularly wish to stress. That is, the question of the periodicity of the headache. You have to differentiate from only one thing, and that is the periodic headaches of malaria. I have seen a number of cases of sinus so called blocking or sinus headache relieved by the use of quinine. In fact, I intended to operate on one patient, but found by a blood examination that the condition was such that a few doses of quinine cured him instead of an operation.



Dr. Lang spoke of transillumination. You often find a dark sinus on transillumination, without having an acute sinusitis or even a chronic sinusitis at that time, because the individual previously had sinusitis, and the mucous membrane is thick. This often gives a dark shadow on transillumination. You will find the same thing with your x-ray.

I know of nothing which comes nearer destroying the esprit de corps, so to speak, of an individual, than chronic sinusitis, and the one thing, as a rhinologist, which I regret more than any other is that we are not always able thoroughly to relieve it.

I wish to express my appreciation to Dr. Lang for his paper, and I am quite sure that all of the rhinologists present are grateful to him.

DR. GEORGE B. SMITH (Rome): Dr. Lang said that there is some doubt about the function of the sinus. I think the chief function of the sinus has been to provide a living for nose and throat men. You know the general practitioners take out tonsils and the optometrists look after the eyes, and if it were not for sinuses we nose and throat men would have probably starved to death a long time ago.

There is just one thing that Dr. Lang failed to mention which I think is very apropos in discussing sinuses, and that is the incidence of influenza. Prior to 1918, the sinus infection was a comparatively rare condition in our field. Since 1918 influenza has probably increased the incidence of acute sinus infection many-fold.

I think in the old days probably a great many sinus infections were due to inferior dental work. In that period of time, dental work has improved very radically, and we see comparatively few infections of the maxillary sinuses that are due to poor dental procedure. I think most of our sinus infections we see today are due to influenza.

DR. FORD WARE (Macon): I enjoyed Dr. Lang's paper very much, and I want to ask a question regarding the treatment. I want to know what his experience has been in restricting the diet in cases of sinus infection. Some men claim that diet does not have much effect, but in my limited experience I have found that by restricting the diet, these patients do much better.

I should like to know what Dr. Lang's results have been in this respect.

DR. G. H. LANG (closing): I am a bit disappointed that we did not provoke a little wider discussion of a thing that is very near to the heart of the rhinologist, and I was in hopes that it might have been discussed a little more by the general profession.

Dr. Smith's comment about sinus trouble being very much on the increase since 1918 may or may not be true; I do not know, but it seems to me while I was in New York in 1912 we saw more sinuses than almost anything else in the hospital. It may have been because of the climatic conditions, or what-not.

I do think that we are more alert about sinus infections now, and that the public has been educated to the point where they get a little pain in the head and run in and find out whether or not they have a sinus trouble. They associate the pain in the head with the sinus trouble. They think of it in terms of the sinus. I think it is due largely to the fact that the public is aware and the profession is looking more towards the sinus.

As regards Dr. Ware's question about diet, I have given very scant thought to diet in the treatment of acute infections of the sinuses. Undoubtedly it is more and more coming to the front as an etiologic factor, and just what it will prove eventually as to a means of therapeutics, I am sure I do not know, but I see very few cases in my own practice where I have thought of diet, that is with strictly sinus infection.

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## SOME OBSERVATIONS WITH INTRA- VENOUS CHOLECYSTOGRAPHY

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One of the earliest applications of Roentgen's discovery of x-ray was the study of the abdominal cavity and its contents. Because these were of such uniform density it was apparent that this means was useless for discovering pathological conditions except those that had some degree of calcification as a feature. The first x-ray investigation of gallstones was done in 1897 by Gilbert, Fournier and Oudin and they expressed the opinion that this means was useless until such time as great improvement had been developed. They reached their conclusions on the ground that most stones are composed of cholesterol and are therefore very permeable to the roentgen ray. The first demonstration of a gallstone in a living subject is ascribed to Beck of New York in 1900. Buxbaum of Karlsbad demonstrated gallstones in 4 cases out of 30 attempts on living subjects. In 1914 L. G. Cole found that 80 per cent of gallstones submerged in bile cast a shadow less dense than this medium and thought that this would indicate that only 20 to 25 per cent of stones could be shown by x-ray. Graham states that the fundamental consideration in disease of the biliary tract is the matter of infection and second and only of slightly less importance, the results of such

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infection. In other words, cholecystitis, with or without stones, being the condition demanding treatment is the one which needs to be discovered.

In the X-ray department of Barnes Hospital St. Louis from 1914 to 1924 there were 4040 X-ray examinations of the alimentary tract and 261 of the gallbladder. Among these calculi were demonstrated in 85 cases. Of 152 cases reported with gallbladder disease with or without stones 89 were operated upon and the diagnosis was correct in 67.1 per cent. Over the same period there were 332 operations on the gallbladder. In these cholecystitis alone was found in 124 cases and with stones in 208 cases. Certain conclusions may be drawn from these figures:

1. Though clinicians had immense faith in the X-ray examination of the gastro-intestinal tract they had very little in that part pertaining to the biliary tract.

2. Most of the operated cases were clinically sufficiently clear or severe to warrant omission of x-ray examination.

3. Only 63 per cent of the cases of cholecystitis had stones and in a material proportion these must have been of pure cholesterol composition. These figures therefore indicate that ordinary Roentgen ray methods of examination of the biliary tract were of a very low order of efficiency prior to 1924.

Many writers have stated that radiography is a study of contrasts in density. In 1923 Graham and Cole conceived the idea that if the gallbladder could be rendered visible by x-ray after being filled with contrasting substance, not only might earlier and more certain signs of pathological change in the organ be made recognizable but also such a procedure might be a more accurate index of function of both liver and gallbladder. In 1924 the discovery of a new method of roentgenological examination of the gallbladder was reported by Graham and Cole. On the basis of preceding work by Abel and Rowntree who had shown that the phenolphthaleins as a class were largely excreted in the bile, they found that the phenolphthaleins containing either iodine or bromine injected intravenously into animal or man, it also was excreted in the bile and a sufficient concentration of the halogen was obtained in the gallbladder to cast a shadow on a film when exposed to x-ray. Cholecystography was the name applied to this visualization of the gallbladder by this method and the x-ray films were called cholecystograms. After trying 47 substances they reached the conclusion that sodium tetraiodophenolphthalein and phenol-

tetraiodophthalein cause the least reaction.

In this series of cases presented sodium tetraiodophenolphthalein was used. It is excreted by the liver in the bile shortly after intravenous injection and diverted into the gallbladder by the action of the sphincter of the common duct, if subject is fasting. Once inside of the gallbladder the bile and iodine become more concentrated, due to absorption of water by the wall of the viscus. The iodine is removed from the normal gallbladder as it empties and with it goes the opacity of the organ to x-ray. The bile is prevented from entering the duodenum continuously during secretion by the liver by a regulatory mechanism at the distal end of the common duct. Cholecystography is therefore largely a test of physiological capacity.

Whitaker in 1926 found clinically that after the ingestion of fat the gallbladder shadow decreased greatly in size. For this to take place in the walls of the gallbladder must be free from that rigidity which would be produced by infiltration of fibrosis consequent to infection. Graham and Cole hold however, that if the gallbladder is visualized its coats are not inelastic. In other words, a pathological process sufficient to produce inelastic walls is incompatible with preservation of the concentrating functions of the organ. Sosman, Mateer and Henderson believe that sometimes stones may be present in a dye filled gallbladder which can only be rendered visible with a decrease in the size of this organ by the administration of the fat meal. Sosman believes that its omission will lead to the non-discovery of many stones.

The technique of administration of the dye is a much debated one. Many claim that the intravenous method is the one of choice and some prefer the oral method. Graham uses the intravenous method almost entirely in his clinic. In support of this method he claims that there can be no dispute over the fact that when the solution is given intravenously there is a known amount of the substance to be excreted and the possibility of complete absorption which occasionally presents itself in the oral method is completely eradicated. If alimentary administration is resorted to two important variables are introduced:

1. The amount of absorption of the dye.
2. The rate of dye absorption.

Either of these may profoundly affect the outcome of the procedure. Therefore, the re-



sults after the oral administration will always be open to doubt in those cases in which there is deficient visualization of the viscus. Among the advocates for intravenous administration are, Graham, Sosman, Case, Wilkie and others. The strongest advocate for oral administration is Sterart.

In the cases of this series the intravenous method was used. Two of the cases had previously received the oral administration of the dye and in neither was the gallbladder visualized. Both of these cases received the dye intravenously at later date and x-ray films of both showed normally filling gallbladders.

In the last 300 cases of Graham's series in which sodium tetraiodophenolphthalein was used, 205 received the dye intravenously. There was no reaction in 96 cases (47 per cent), mild reaction manifested by nausea or vomiting in 75 cases (37 per cent), and a reaction of the second degree in 34 cases (16.5 per cent). Of the 93 cases receiving the dye orally there was no reaction in 33 cases (33.3 per cent), mild reaction in 17 cases (18 per cent), and reaction of the second degree in 45 cases (48.7 per cent).

In this small series of 20 cases I have had one reaction of the second degree manifested by a chill, following which the temperature reached 103 degrees. Three hours later the temperature was normal. Nausea and vomiting also occurred. I have kept no record of the sensation of nausea. Three cases in this series vomited one or more times following the intravenous administration of the dye. In no instance was there an alarming reaction accompanied by dyspnea, cyanosis, or thready pulse.

The amount of sodium tetraiodophenolphthalein used intravenously to obtain x-ray films vary in different clinics. In Graham's clinic 40 mg. of the dye per kilo of body weight is used. In Sosman's clinic at the Peter Bent Brigham Hospital 35 mg. of dye is used per kilo of body weight. In my series I have used 35 mg. per kilo of body weight. This is dissolved in 60 c.c. of distilled water to which 1 c.c. of a 10 per cent solution anhydrous sodium carbonate is added to insure alkalinity. This is filtered and then autoclaved in the operating room the night before administration. The following morning the patient is allowed no breakfast and the dye is administered at 9:00 A. M. Nothing by mouth is allowed for two hours. If there is no nausea or vomiting, water is given. Lunch is omitted and the first film is taken at 5:00 P. M. A fat meal consisting of milk and eggs is then given and the second film is taken at 7:00 P. M. If for some untoward reason we are unable to give the solution of dye at the time we do not keep the preparation. A fresh solution is made. It is my belief that a solution of dye which stands for 24 hours is more liable to cause a reaction although I have no proof of this. I might say here that the method used to inject the dye in this group is the two way stop cock method. Normal saline warmed to body temperature is injected first to insure the needle being

in the vein. The dye is then injected and this is followed by 50 c.c. normal saline to prevent or at least dilute any back flow of the dye and thus obviate a slough. In no instance have we had a slough of tissue because the dye has entered the soft tissue instead of the vein. The gravity method of administration is most commonly used when the dye is given intravenously.

Many writers have stated that jaundice is a contra-indication to cholecystography. In my group there were three cases of jaundice, not only noted on clinical examination but proved by the icterus index of blood taken immediately preceding the administration of the dye. The icterus index of a normal individual is 5. In these three cases it was 15, 16, and 50 respectively. In none did a reaction occur. Likewise in none did I obtain a visualization of the gallbladder. Cholecystography is a test of the function of the gallbladder and not a method of differential diagnosis for jaundice. In any patient with jaundice it is obvious that the biliary mechanism is not functioning normally and the natural outcome as to differential diagnosis and patients is non-visualization of the organ. Therefore while jaundice is no contra-indication per se the procedure is of no value as to differential diagnosis and therefore should be omitted.

Another rather interesting fact in this series is that two of the cases had had previous operations upon the gallbladder with removal of stones and drainage of the organ. Both of these cases had been operated upon by Atlanta surgeons one 8 months previously and the other 4½ years previously. I was unable to obtain a shadow of the gallbladder by the intravenous method in either case. One of these cases was subsequently operated upon on the service of Dr. George Fuller and a small sclerotic, fibrotic thick walled gallbladder was removed. Pathologically it was diagnosed as chronic cholecystitis. Clinically there was no question that the organ was diseased. The other case is to be operated upon about two months hence. She had a sub-total thyroidectomy for Graves disease and is now convalescing from this procedure. Whitaker of Boston was able to collect 12 cases of cholecystostomy with removal of stones and in not a single case was he able to obtain a shadow on x-ray by intravenous cholecytograms. Lord Berkeley Monnyhan of Leeds in his masterly work on abdominal surgery states that gallbladder drainage is "en passe" and not the operation of choice except when there is free pus in the abdomen from a perforated gallbladder or empyema of the organ. Cholecystography certainly substantiates this view.

One of my cases was a diabetic. The urine was positive for sugar and the blood sugar was 286 mg. per 100 c.c. of blood. There was no reaction when the dye was given. Another patient in the series had a text book picture of cholecystitis clinically. She was an obese woman of 42 years of age complaining of belching of gas, pain in the right upper quadrant radiating to the right scapula and other salient facts. Every one diagnosed the case as cholecystitis with cholelithiasis. I was confident that this was the correct diagno-

sis and was elated that I would get films with negative shadows of stones. The dye, much to my surprise, showed a normally filling organ with slow emptying. It was such a typical gallbladder history that the patient was operated upon anyway, by the chief of the service. A normal gallbladder was found at operation, the operating surgeon saying so at the time. The pathologist likewise reported a normal gallbladder when sections were studied under the microscope.

Another case in my series which is worthy of mention is that of a woman who complained of symptoms simulating cholecystitis and x-ray films showed a gallbladder on the left side.

The above series are small but it has demonstrated some interesting findings. I have purposely neglected to mention the interpretation of x-ray films in cholecystography. With rigid technique and films of good detail, the absence of a shadow makes cholecystitis a certainty when the intravenous method is used. Faint visualization is also, for all practical purposes, pathognomonic of cholecystitis. The presence or absence of stones is in reality a secondary consideration as far as chronic cholecystitis is concerned. I do not believe that emptying of the organ following the ingestion of a fat meal is of any import. I believe with Graham that if a gallbladder visualizes well it is a functioning organ. The report of poor emptying from an x-ray standpoint has lost favor as far as my experience goes. In conclusion I would like to state that it is my opinion that an experienced roentgenologist should render his view as to the amount of concentration and not the individual surgeon. These men are far more capable of an expert opinion on the so-called border line cases of the amount of concentration of the dye in the viscus but I do not agree with them that the emptying time is of notable import.

The cases here reported were collected from both surgical and medical wards of the Grady Hospital White Unit. They are consecutive cases and in no way selected. I wish to express my appreciation to the heads of the various departments for the privilege of studying these patients, and especially thank Dr. F. M. Peacock, house officer of the hospital for his assistance and Dr. William Bryant for his patient efforts to help me obtain the x-ray films.

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## THE "BLINDING FILARIA" OF GUATEMALA

(*Onchocerca Coecutiens*)

### *Report of a Case Which Occurred in Georgia*

W. D. MIXON, M. D.

R. L. JOHNSON, M. D.

G. E. ATWOOD, M. D.

Waycross

In the year 1915, Dr. Robles found on the Pacific slopes of the volcanic ranges of Guatemala, in a quite narrow strip of country, between 600—2000 mm. of altitude, many individuals (in some places up to 97 per cent of the population), on whose scalp were fibroma-like nodules, about the size of a nut, containing a convolute of "Filariae." He associated them with certain chronic troubles of the eye (Keratitis, etc.), stating that the sight of people who had been practically blind for a long time, was improved, as if by a miracle, in a few hours after the excision of the filaria-cysts and cured in a few days.

According to the publications, not only were the native Indians, but also white people—coffee planters of the infected region—successfully treated in the same manner. Mora also reported a case of chronic mental disease apparently cured in ten days after the removal of a parasitic cyst of the occiput.

The first stage of the eye-troubles begins with pain in the affected eyes, headache, severe photophobia, "feeling of foreign body," conjunctivitis, and a diminution of vision. A peculiar superficial keratitis puncta of the palpebral fissure is said to be especially characteristic of the disease. The later stages show acute and chronic iritis, which leads finally to adhesion, thereby giving rise to "a deviation of the pupil downwards, not found in any other eye diseases, and also to complete blindness; the fundus oculi remains in ordinary cases apparently unaltered. Also reported as characteristic is microcornea, i. e., a diminution of the transparent corneal margin in consequence of circular keratitis. In other cases of disturbance of vision, sometimes of a very high degree (and of other subjective symptoms such as photophobia, etc.), healed



after excision of the node, objectively eye changes could hardly be determined.

Calderon points out that every one who has *Onchocerca*-cysts on his head also suffers in regard to his vision but that the eye ailments caused by *Onchocerca*, except cases with too advanced cicatrization, are curable by excision of the nodes, and even the latter show improvement of vision and decrease of photophobia.

Robles and Calderon believe that the eye affections are provoked by *Onchocerca*-toxins and that the latter are eliminated by the excision of the parasitic nodes; while Pastor Guerrero holds it is improbable that the hypothetical toxin accumulated for years in the body could be eliminated within the few hours that elapsed between the operation and the improvement of the vision, and he considers it more probable that the operation may perhaps remove a pressure on a nerve which was causing the eye trouble. But this explanation of Pastor Guerrero is hardly acceptable, and Robles in favor of his toxin-hypothesis can put forward the observation that after the removal of an *Onchocerca*-cyst located in an unusual place, i. e., not on the scalp but on the hip—he could ascertain an improvement already evident the next morning.

#### Case Report

Well nourished male (Negro) about fifty years old. Born in Alabama and has lived in Georgia and Florida, and for the last ten years has been employed on a turpentine farm in Ware County, Georgia.

About ten years ago, he noticed a small nodule over the right eye, close to the border of the hair and believed that it was due to a bruise.

For the past seven or eight years, he has complained of a peculiar feeling in his head, his mind would become very confused and felt as if he wouldn't know what he was doing. At the same time, bright light would cause pain in his eyes. The pain gradually subsided during the past few years, but he noticed a white ring forming around the pupil in each eye. This condition gradually got worse and finally he could not see to do his work.

This Negro reported to our eye clinic for the purpose of having cataracts removed, or to be placed on the pauper list, as he was no longer able to see to perform manual labor.

Upon examination of his eyes, he was found to have a thickened, highly injected conjunctiva. A marked marginal keratitis puncta of the palpebral fissure. The cornea was opaque except for a small

space near the pupil in each eye. The cornea also had a wrinkled appearance, as if the tension in the anterior chamber was insufficient to distend it. A diagnosis of *Onchocercosis* was made and it was decided to enucleate the tumor immediately.

The tumor was situated in a line directly above the center of the right eye brow. The upper edge just within the hair margin, the lower edge extending onto the forehead. An area equal to about one and a half by two inches was occupied by the growth, with long axis crossways. After preparing the area for operation by the usual shaving, soap and water, the skin was painted with standard A.M.A. solution (acetone, mercurochrome and alcohol). There was a peculiar feel to the mass; not so solid as lipoid or fatty tumor; this feeling was that of near fluctuation but not quite. The contour was smooth and the skin drew smoothly across without signs of retraction from fibrous attachment. The site of incision was infiltrated with a 2 per cent solution of procaine and a transverse elliptical incision made in the long axis of the tumor. The skin was not attached to the tumor and it was easily enucleated, coming away like a pad of encapsulated butter. The incision was closed with subcutaneous catgut and Dermal in the skin proper. After dressings were applied the growth was examined. As mentioned above, it resembled an encapsulated pad of butter; there seemed to be a richer blood supply than is usual in a simple fatty tumor, the portion that simulated fat was a deeper yellow, the trabeculae were thicker and looser in structure; and before cutting gave a feeling of semi-fluctuation.

Several smears were made from the bloody exudate of the tumor, fixed with gentle heat, stained for five minutes with gentian violet, washed, dried and placed under the microscope. The first field examined, four larva and one filaria coecutiens, were found. The microscopical findings confirmed the diagnosis, and to date no further examinations have been made of the blood stream for filaria.

The patient was instructed to return to the hospital in a week to have the dressing removed. At the end of ten days, the patient returned, and the dressing was removed. The wound had healed perfectly and his eyes had improved very much. The patient was not seen again for eight weeks, at the time his vision was practically normal, and his eyes were normal except for a slight opacity at the sclero-corneal margin.

This Negro was able to resume his work within four weeks after the operation and all discomfort from his eyes and head have entirely disappeared.

Although this disease is extremely rare in the United States, it is not believed that this is the only case in the South and in justice to humanity, it behooves our profession to be on the alert.

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**THE JOURNAL**

OF THE

**MEDICAL ASSOCIATION OF GEORGIA**

Devoted to Welfare of Medical Association of Georgia

139 Forrest Avenue, N.E., Atlanta, Ga.

JULY, 1934

## THE TREATMENT OF SYPHILIS

"My bones ached, my loins stank and I was afflicted with a sore disease withal." These words by a libidinous old Hebrew have been called the most succinct description of syphilis ever penned. Yet, in spite of Karl Sudhoff's scholarly researches into the early history of the disease, many Europeans still insist that the New World cradled syphilis. Some of our one-time friends across the water will soon have proved to their own satisfaction that America was really responsible for the World war!

Wherever syphilis originated, its clinical recognition dates from the siege of Naples just after the return of Columbus. In 1498, mercury was introduced as a therapeutic agent and, though a wild variety of other drugs were tried, mercury remained the sheet-anchor of treatment for some three centuries, when iodide was added. Within our lifetime, a short twenty-five years ago, Ehrlich, after 605 failures, succeeded in synthesizing arsphenamine. It was quickly found that this was not the perfect antisyphilitic drug, and 308 further experiments resulted in neoarsphenamine. Then, in 1921, Levaditi and Sazerac, following up the incompleated work of Sauton and Robert, added bismuth to the armamentarium. Six years ago no less than 113 preparations of this element for the treatment of syphilis were on the market abroad, and probably many more have been put out in this country.

It was time for an authoritative work on syphilotherapy to appear in this country, and the need has been met in a recent monograph from the Johns Hopkins Hospital, which is by the way not expensive.\*

\*The Modern Treatment of Syphilis, by Joseph Earle Moore, M.D., Associate in Medicine, The Johns Hopkins University; Physician in Charge, Syphilis Division of the Medical Clinic and Assistant Visiting Physician, The Johns Hopkins Hospital, Baltimore, Springfield & Baltimore; Charles C. Thomas, 1933.

If every physician who treats syphilis should study this book and act accordingly, syphilis would be much less a problem than it is today in Georgia. The work makes no pretense of covering the whole field of syphilis, though it contains most interesting chapters on "The Biology of Syphilitic Infection in Relation to Treatment," "The Prognosis of Syphilis, Untreated and Treated," and "Syphilis and Marriage." It strikes out along relatively novel lines in being based on the results obtained by the "Cooperative Group" (the chiefs of the Syphilis Clinics at the University of Pennsylvania, The Mayo Clinic, The University of Michigan, Western Reserve University, and the Johns Hopkins University, and representatives of the United States Public Health Service), with of course special emphasis on those obtained under the author's own supervision.

It is pleasant to note the attention paid to the treatment of pregnant women with syphilis and of their offspring at the Emory

*The JOURNAL would like to record the scientific work of Georgia doctors. It earnestly requests, therefore, that each physician in the State who publishes a contribution in some other medical periodical submit an abstract of the article for these columns.*

University Division of Grady Hospital. The writer may be pardoned for remarking that work done in the same clinic on cardiovascular syphilis has been ignored. His experience with more than 25,000 injections of water-soluble bismuth has led him to somewhat different conclusions from those of this author who has, it is true, given almost twice as many of a bismuth in oil. With these minor reservations, the book is enthusiastically recommended.

It would be impossible here to discuss the treatment of syphilis in its various stages and manifestations, or to discuss why arsphenamine is often to be preferred to neoarsphenamine. It is possible, however, to state that after more than four hundred years mercury has been discarded by the leaders in the fight against syphilis in favor of bismuth. One may also outline Moore's rec-



ommendations for the treatment of syphilis when recognized early:

The first thing to do is make the diagnosis. If it is impossible to secure a dark field examination to identify the *Treponema*, one should wait until the Wassermann is positive. The writer most heartily concurs in Moore's insistence that no physician should ever start to treat early syphilis unless he *knows* that syphilis is present. Highly desirable as it is to begin active treatment in the primary seronegative stage, the advantages do not outweigh the uncertainties that may arise later as to whether the patient was ever syphilitic, nor does any doctor wish to have on his shoulders the responsibility of treating a patient over a period of years for a disease he never had.

Once the diagnosis of early syphilis is made, 0.9 Gm. of neoarsphenamine (or better, 0.6 Gm. of arsphenamine) should be administered and this should be repeated at weekly intervals until eight doses have been given. After three, the amount of the arsenical may be reduced a third. Then, without any intermission, ten or twelve doses of bismuth, still at weekly intervals, are injected intramuscularly. The keynote of this plan is that there should be *no intermission whatever* for at least a year. At the conclusion of the second series of the arsenical, the spinal fluid is examined. A Wassermann test of the blood is made every few weeks. Any course of treatment that includes less than twenty doses of an arsphenamine must be pronounced inadequate. Continuous treatment should be carried on until a year after the blood and spinal fluid have become and remained entirely negative, and after that, like everyone else, the patient should have a yearly physical examination. This plan of intensive and prolonged attack may be expected to yield a "cure" in approximately 90 per cent of cases.

L.M.B.

Current information in reference to venereal disease may be obtained through subscription to "Venereal Disease Information," fifty cents per annum, payable in advance, to the Superintendent of Documents, Government Printing Office, Washington, D. C.

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To Visit South Carolina—Wm. R. Dancy, Savannah; and Wm. A. Mulherin, Augusta.

To Visit Tennessee—E. O. Shellhorse, Dalton; and Z. V. Johnston, Calhoun.

## EXTENSION COURSE—RESOLUTION

WHEREAS: The two medical colleges of Georgia, with the co-operation of the State Board of Health, have been holding extension courses at several central points in Georgia, and

WHEREAS: These courses have been very interesting and instructive to the physicians attending same, and

WHEREAS: This contact with members of the faculty and the physicians throughout the state, can but result in a better acquaintance and understanding between the medical colleges, State Board of Health, and the physicians of Georgia;

THEREFORE: Be it resolved that the physicians present at the extension course in Cordele, this the 13th day of July, 1934:

THAT: We approve most heartily of these courses, and respectfully ask that they be continued another season.



MEMBERS FROM GEORGIA REGISTERED AT  
THE CLEVELAND SESSION OF THE A.M.A.

Anderson, Wm. W., Atlanta  
 Askew, H. H., Atlanta  
 Bartholomew, R. A., Atlanta  
 Bishop, E. L., Atlanta  
 Brewer, A. M., Tunnell Hill  
 Brown, C. T., Guyton  
 Bunce, Allen H., Atlanta  
 Chappell, Amey, Atlanta  
 Clark, James J., Atlanta  
 Clay, Grady E., Atlanta  
 Davison, Hal M., Atlanta  
 Drane, Robt., Savannah  
 Equen, Murdock, Atlanta  
 Fancher, J. K., Atlanta  
 Fountain, Jas. A., Macon  
 Franklin, R. C., Swainsboro  
 Garner, J. R., Atlanta  
 Giddings, Glenville, Atlanta  
 Greer, C. B., Brunswick  
 Hale, B. C., Rossville  
 Hesse, Herman W., Savannah  
 Kelly, G. Lombard, Augusta  
 Kracke, Roy R., Emory University  
 McCord, Jas. R., Atlanta  
 Mitchell, L. C., Sandersville  
 Myers, William H., Savannah  
 Nellans, Chas. T., Atlanta  
 Norris, Jack C., Atlanta  
 Paullin, James E., Atlanta  
 Park, Emory R., LaGrange  
 Phillips, W. P., LaGrange  
 Pruitt, Marion C., Atlanta  
 Roberts, C. W., Atlanta  
 Roberts, M. Hines, Atlanta  
 Roberts, Stewart R., Atlanta  
 Saye, E. B., Macon  
 Sharpley, H. F., Jr., Savannah  
 Simonton, Fred H., Chickamauga  
 Stampa, Samuel, Atlanta  
 Sydenstricker, V. P., Augusta  
 Toepel, Theodore, Atlanta  
 Wahl, Ernest F., Thomasville  
 Weaver, Olin H., Macon  
 Yampolsky, Joseph, Atlanta

SUDDEN DEATH FROM DINITROPHENOL  
POISONING: REPORT OF CASE  
WITH AUTOPSY

Fenn E. Poole and Robert B. Haining, Los Angeles (*Journal A. M. A.*, April 7, 1934), stress the fact that every one who has commented on the use of dinitrophenol has emphasized the importance of restricting its clinical trials to carefully selected cases under constant supervision. However, it appears that the compound is being widely popularized as a weight-reducing agent and is being bought and used with no competent direction. This seems highly deplorable in the present state of knowledge of human responses to dinitrophenol. Thorough and extensive animal experiments have been performed (notably by Tainter and Cutting and by Mange, Mayer and Plantefol) and the toxic effects and the fatal dosage for animals have been accurately determined. This work, however, must not be presumed on too freely in dealing with human beings, and it can have no value whatever in predicting or preventing the occurrence of severe allergic manifestations. There is no antidote for dinitrophenol poisoning. The only measures that have seemed to reduce the mortality in animals have been administration of fluids and cooling baths. In dinitrophenol-poisoned munition workers, Mayer found that intravenous injections of dextrose constituted the most effective treatment. This seems rational because of the marked loss of tissue glycogen that has been shown to occur. Morphine allays the excitement and the dyspnea and may check the rise in temperature, but it cannot halt the process of intoxication and, in dogs poisoned with dinitrophenol, morphine does not affect the mortality. In the case of sudden death from dinitrophenol poisoning that the authors report, the victim heard of the compound from a friend and bought and used it without competent supervision. A physician was not consulted until a few hours before death. The dosage in this case was high but within the presumed limits of safety, so the fatality should probably be regarded as an example of allergic idiosyncrasy. Before taking dinitrophenol, the patient had been taking desiccated thyroid extract, one-fourth grain (0.016 Gm.) three times a day for about one year. The authors do not know whether or how this has significance.

The American College of Physicians will hold its nineteenth annual clinical session at Philadelphia, Pa., April 29-May 3, 1935. Announcement of these dates is made particularly with a view not only of appraising physicians generally of the meeting, but also to prevent conflicting dates with other societies that are now arranging dates for 1935 meetings. Dr. Jonathan C. Meakins, Montreal, Quebec, President, will arrange the program for the general session; Dr. Alfred Stengel, Philadelphia, Vice-President, will be general chairman of local arrangements and in charge of the program of clinics. Mr. E. R. Loveland, Executive Secretary, 133-35 South 36th Street, Philadelphia, may be addressed in reference to any feature of the session.

Mrs. Winifred Hathaway, New York City, in an address delivered at Montgomery, Ala., on June 4th, stated that, "Misguided economies in economic, social and educational assistance to the physically and mentally handicapped children of the nation, if we persist, will become 'a heavy mortgage on the future.' The handicapped child of the present will doubtless be the doubly handicapped citizen of the future unless he is afforded an opportunity to overcome his limitations by making the most of his remaining powers."

## GEORGIA DEPARTMENT OF PUBLIC HEALTH

T. F. ABERCROMBIE, M.D., *Director*

## AMEBIC DYSENTERY IN GEORGIA

The outbreak of amebic dysentery in Chicago last fall no doubt did a great deal to center the interest of the people of the importance of a proper evaluation of this disease in the United States. Seven known cases registered at two Chicago hotels from Georgia, and hundreds of cases have been reported throughout the country, who contracted the disease in Chicago. Amebic dysentery is usually considered a disease of the tropics, but since the latter part of the last decade it has been known, under favorable conditions, to spread in more temperate climates. There is at least one area in this state where it is known to be spreading at present.

Dr. L. C. Allen of the Hoschton Clinic reported nine cases to the State Department of Health, which have occurred within the past two years, and asked that a study be made of the disease in the area where it is breaking out. The Mayor of Bethlehem in Barrow County, upon the advice of certain physicians in Winder, asked for assistance there where more than twenty-five cases have occurred more recently, particularly last fall.

This condition was made known to Dr. G. W. McCoy, Director of the National Institute of Health, and through agreement with him the study of amebic dysentery in Georgia was made possible to be conducted by the Division of Epidemiology. Dr. McCoy furnished a trained technician from his staff of workers who had had experience in the Chicago outbreak, and a laboratory has been established at Winder.

It is too early to make any summaries or draw conclusions, except to state that a survey of the entire town of Bethlehem is now being conducted and out of some 150 people examined there, 18 per cent show amebic cysts (*histolytica*) infection. The town with a population of 200 has many open privies and no public water supply, open surface wells being in general use. All of these carriers are potential spreaders of the disease to others.

Epidemiological study indicates that the infection was brought to Bethlehem five years ago, from an area about three miles southeast of the town, where the first case is known to have occurred in 1926, presumably from a soldier who claims he obtained the infection in the World war, and who moved to this area in 1925 and lived there four years. This ex-soldier now lives in Winder and has

been treated by several physicians at Monroe and Winder for amebic dysentery.

The disease is spreading with considerable rapidity and has now become a problem in Barrow and Walton Counties. Physicians in Winder have treated some thirty cases and those at Monroe state that they have probably treated a hundred, although records of these cases have not at present been obtained.

This work offers opportunity for the gathering of useful and essential knowledge about a very distressing and dangerous disease and an increasing menace to the people of Georgia. If conditions throughout the state, even at present, were similar to those in the amebic dysentery areas already established, it requires no stretch of the imagination to realize the great suffering, loss of life, and tremendous economic loss that would come to our people.

The study will be pushed vigorously and we have received valuable assistance more recently by the appointment of two nurses by the FERA to assist in the collection of specimens and in follow-up work, which is of tremendous importance in this study.

It is well that the physicians of Georgia bear in mind that there are many cases of amebic dysentery in the state, who have never been to the tropics, or even out of the state, and regard with suspicion the dysenteries in their practice, especially those that tend to become chronic. A laboratory examination and improvement of the condition after specific treatment will in most cases establish a diagnosis.

## TULAREMIA INCREASING

Tularemia or "rabbit fever" is apparently increasing in Georgia, as indicated by the reports of the laboratory for the first quarter of 1934. About thirty-five cases have been confirmed by laboratory tests only, as compared with nine cases for the same period of 1933.

Tularemia is naturally a disease of rabbits and certain other rodents. In certain parts of the country it is transmitted from infected rodents to man by biting insects. This is especially true in the western states. In the eastern states most of the human cases result from direct contact with wild rabbits. Hunters, marketmen, butchers and cooks who clean wild rabbits are more apt to develop the disease.

Whether the recent increase in human cases is due to a revival of the public appetite for



rabbit meat or whether the disease is increasing in rabbits, it is impossible to say.

The State Department of Public Health advises that persons who will and must handle or dress wild rabbits use rubber gloves so as to prevent contact of blood and tissue juices with abrasions or breaks in the skin.

### *Georgia's Health*

#### BOOK REVIEW

*A Primer for Diabetic Patients.* By Russell M. Wilder, M.D., Professor and Chief of the Department of Medicine of The Mayo Foundation, University of Minnesota; Head of Section on General Metabolism, Division of Medicine, The Mayo Clinic. Fifth Edition. Reset. 172 pages. Philadelphia and London: W. B. Saunders Company, 1934. Price \$1.75.

This little book, which can be conveniently carried in the pocket, is a gem. It is extraordinary how Dr. Wilder has been able to get into such small compass everything (including many recipes) that a layman with diabetes should know about his mode of living. The book, of course, is not designed to replace the care of a physician. On the other hand, many a doctor who does not treat diabetes every day will find that his dietary directions will be simplified with this book and every doctor who has to treat a diabetic patient who can read will have his job much simplified by the use of such a primer. Dr. Wilder has no patience with the "fancy-priced" specially prepared foods and he has even carried his common sense so far as to make this book very cheap.

L. M. B.

#### BOOKS RECEIVED

*The Medical and Orthopaedic Management of Chronic Arthritis* by Ralph Pemberton, M.D., Professor of Medicine, Graduate School of Medicine, University of Pennsylvania; Chairman, American Committee for the Control of Rheumatism; Member Council on Physical Therapy of the American Medical Association; Physician to the Abington Memorial and the Bryn Mawr Hospitals; Consultant to the Philadelphia Orthopaedic Hospital and Infirmary for Nervous Diseases and to the Chester County Hospital; Author of *Arthritis and Rheumatoid Conditions—Their Nature and Treatment*, 1929; French Translation, 1933. And Robert S. Osgood, M.D., John Ball and Buckminster Brown Professor Emeritus of Orthopaedic Surgery, Harvard Medical School; Member, American Committee for the Control of Rheumatism; Member, Council on Physical Therapy, American Medical Association; Consulting Surgeon, Boston Children's Hospital; Member, Board of Consultants Massachusetts General Hospital. Member of American International, British (Hon.) Italian (Hon.), Scandinavian (Hon.), Belgian (Cor.), Orthopaedic Associations. Contains 403 pages. Publishers: The Macmillan Company, 60 Fifth Avenue, New York City.

*Surgery of A General Practice* by Arthur E. Hertzler, M.D., Chief Surgeon, Halstead Hospital; Professor of Surgery, University of Kansas; and Victor E. Chesky, M.D., Chief Resident Surgeon, Halstead Hospital. Contains 602 pages with 472 illustrations. Publishers: The C. V. Mosby Company, 3523-25 Pine Boulevard, St. Louis, Missouri. Price \$10.00.

*Spinal Anesthesia—Technic and Clinical Application* by George Rudolph Vehrs, M.D., Salem, Oregon. Contains 269 pages. Publishers: The C. V. Mosby Company, 3523-25 Pine Boulevard, St. Louis, Missouri. Price \$5.50.

#### ARTICLES ACCEPTED

##### *To The Editor:*

In addition to the articles enumerated in our letter of May 31 the following have been accepted:

Abbott Laboratories:

Mixed Ragweed Pollen Extract Decimal Dilution Set.

Mallinckrodt Chemical Works:

Hippuran

Hippuran (Crystals) 12 Gm. vial.

Sterile Solution Hippuran 25 cc. size.

Wm. S. Merrell Company

Diothane

Diothane Crystals.

Diothane 10 per cent Solution.

Parke, Davis & Co.:

Ampoules Thio-Bismol, 2 Gm.

Tuberculin for the Mantoux Test.

S. M. A. Corporation:

Carotene-SMACO

SMACO Carotene in Oil.

SMACO Carotene with Vitamin D Concentrate in Oil.

SMACO Vitamin D Concentrate in Oil.

SMACO Carotene and Vitamin D Concentrate in Cod Liver Oil.

Winthrop Chemical Co., Inc.:

Diodrast

Diodrast Sterile Solution (35 per cent, weight/volume), 10 cc. size.

Diodrast Sterile Solution (35 per cent, weight/volume), 20 cc. size.

The following product has been accepted for inclusion in the List of Articles and Brands Accepted by the Council but Not Described in N.N.R.:

Stevenson's Mineral Oil Co.:

Stevenson's Heavy Russian Mineral Oil (Mint Flavored).

Paul Nicholas Leech, Secretary,  
Council on Pharmacy and Chemistry,  
American Medical Association.

Chicago, Ill.

July 3, 1934.

The National Tuberculosis Association will hold its 1935 meeting at Saranac Lake, N. Y., June 24-27, 1935.

## WOMAN'S AUXILIARY

### OFFICERS

President—Mrs. J. E. Penland, Waycross.

President-Elect—Mrs. E. R. Harris, Winder.

First Vice-President—Mrs. Ralph H. Chaney, Augusta.

Second Vice-President—Mrs. J. M. Barnett, Albany.

Third Vice-President—Mrs. G. Hugo Johnson, Savannah.

Recording Secretary—Mrs. Warren A. Coleman, Eastman.

Corresponding Secretary—Mrs. B. H. Minchew, Waycross.

Treasurer—Mrs. Chas. H. Richardson, Macon.

Parliamentarian—Mrs. Mather M. McCord, Rome.

Historian—Mrs. M. F. Haygood, Alto.

Chairman Public Relations—Mrs. Evert A. Bancker, Jr., Atlanta.

Chairman Press and Publicity—Mrs. J. Bonar White, Atlanta.

Chairman Legislation—Mrs. Dan Y. Sage, Atlanta.

### THE AUGUSTA MEETING

The pre-convention Board meeting of the Tenth Annual Session of the Woman's Auxiliary was held at Hotel Richmond, Augusta, Tuesday, May 8, 8:30 p.m. A "get-together" dance was given by the local profession and their wives from 10:00 to 12:00 p.m.

*Wednesday, May 9th*

Meeting was called to order in the Auditorium of the Georgia Power Company by Mrs. Bonar White, President, at 10:00 a.m. Invocation by Rev. Herbert H. Barber, Rector, Good Shepherd church. Welcome address by Mrs. Ralph H. Chaney. Response by Mrs. Marvin F. Haygood, Alto.

President, Mrs. White introduced Ex-Presidents of the Auxiliary; Mrs. Jas. N. Brawner, Atlanta; Mrs. C. W. Roberts, Atlanta, and Mrs. Marion T. Benson, Atlanta.

Minutes of the last annual session were read and adopted. Rules of order submitted by Mrs. J. M. Barnett, Albany, were approved.

Reports from district managers were submitted as follows:

First District—Mrs. Lee Howard, Savannah.

Third District—Mrs. Herschel Smith, Americus.

Fifth District—Mrs. Olin S. Cofer, Atlanta.

Sixth District—Mrs. W. M. Cason, Sandersville.

Eighth District—Mrs. B. H. Minchew, Waycross.

Ninth District—Mrs. W. R. Garner, Gainesville.

Tenth District—Mrs. D. M. Carter, Madison.

The reports showed the excellent cooperation given by the managers in the organization work in the state. There were three new Auxiliaries organized and two re-organized. All reported educational meetings.

Dr. Chas. H. Richardson, Macon, President of the Medical Association of Georgia, addressed the meeting. He called attention to the value of work which had been accomplished and stressed the necessity for future service.

Dr. B. H. Minchew, Waycross, Chairman of the Advisory Committee to the Woman's Auxiliary, complimented the members of the Barrow County Auxiliary for the celebration of "Doctor's Day." He commended the work the Auxiliary had done.

Among the county Auxiliaries reporting were:

Screven—Mrs. L. F. Lanier, Sylvania.

Chatham—Mrs. Hugo Johnson, Savannah.

Dougherty—Mrs. J. M. Barnett, Albany.

Colquitt—Mrs. C. C. Brannen, Moultrie.

Fulton—Mrs. Geo. Fuller, Atlanta.

Bibb—Mrs. T. E. Rogers, Macon.

Washington—Mrs. J. B. Dillard, Davisboro.

Ware—Mrs. R. L. Johnson, Waycross.

Habersham—Mrs. Marvin F. Haygood, Alto.

Cherokee-Pickens—Mrs. D. H. Garrison, Tate.

Stephens—Mrs. C. L. Ayers, Toccoa.

Richmond—Mrs. Ralph H. Chaney, Augusta.

Reports of other county Auxiliaries showed that their members had been active with many educational and mother welfare programs in their respective counties.

Mrs. White read telegrams from Mrs. Southgate Leigh, Norfolk, Va., President of the Southern Medical Association; Mrs. S. T. R. Revell, Louisville, and Mrs. Ralston Lattimore, Savannah; Mrs. Chas. C. Harold, Macon, and Mrs. Wm. H. Myers, Savannah, Ex-Presidents of the Auxiliary.

Report of the Executive Committee was read by Mrs. Hugo Johnson, Savannah. Synopsis of report follows: Appointment of Au-



ding Committee and Nominating Committee; recommended that the President of the Auxiliary be paid an honorarium of fifty dollars annually beginning with 1933-34 (Article 8 of By-Laws); that officers and chairmen of committees when notified of appointments be told that after a trial of two months in office if they find that due to illness or other causes, they are unable to proceed with their duties, should submit resignations to the President of the Auxiliary.

The report of the Executive Committee was adopted.

The President appointed Courtesy and Resolution Committees.

The health film, "Man Against Microbe" was shown by Mrs. R. L. Rhodes, Augusta. The film emphasizes many of the long arduous struggles by the medical profession to prevent and combat diseases.

The President briefly explained the first educational exhibit; posters, health film material, the book on Education and Public Relations, State Board of Health Bulletins since 1927, A. M. A. Study Envelopes, Health Plays, all accredited material of the Auxiliary, supplies and recommendations, 50 copies of "First Twelve Years" by A.M.A.

The session adjourned at 12.14. A tour of Augusta's famous gardens followed from 3 to 5 p.m. and then tea was served at the old Medical Building from 5 to 7 p.m. for the members of the Association and Auxiliary.

#### *Personnel of Committees*

General Chairman — Mrs. Ralph H. Chaney, Augusta.

Entertainment — Mrs. George Traylor, Augusta.

Registration — Mrs. J. D. Gray, Augusta.

Headquarters — Mrs. R. L. Rhodes, Augusta.

Publicity — Mrs. W. W. Battey, Sr., Augusta.

Transportation — Mrs. G. Lombard Kelly, Augusta.

Tea — Mrs. Peter Wright, Mrs. Edgar Pund and Mrs. W. W. Battey, Sr.

Banquet — Mrs. C. I. Bryans and Mrs. J. R. Robertson.

The tenth annual meeting was held, May 10. Mrs. White presided; welcome address was given by Mrs. G. T. Bernard of Augusta; the response by Mrs. H. H. Askew of Atlanta.

After the minutes were read and adopted, the officers gave their reports which were accepted by a rising vote of appreciation. Dr. C. L. Ayers was introduced and spoke on "The New Deal in Medicine," and stressed

the importance of continuance of educational work in Georgia by the Auxiliary.

Standing committee on Health Education, Public Relations, Scrap Book, Health Films, Hygeia, Student Loan and Legislation were reported. All reports during the convention were filed and a synopsis of them and of our State History will be sent members in the fall.

The Chairman of the Auditing Committee reported that the books and accounts of the Auxiliary were accurately and neatly kept.

Mrs. Jas. N. Brawner, Atlanta, gave a report of the last annual session of the Auxiliary to the Southern Medical Association.

Mrs. Wm. H. Myers, Savannah, made a report on the Auxiliary to the American Medical Association.

Resolutions by Mrs. D. H. Garrison, Tate, Chairman, were adopted as follows:

WHEREAS, The Auxiliary to the Medical Association of Georgia wishes to pay lasting tribute to her doctors:

THEREFORE BE IT RESOLVED: That March 30th in each year, the day that the famous Georgian, Crawford W. Long, first used ether anesthesia, be adopted as "Doctor's Day." Its object shall be to promote the wellbeing and to honor the medical profession. Its observance to demand some act of kindness, gift or tribute in remembrance of the doctor.

BE IT FURTHER RESOLVED: That a copy be mailed to the Auxiliary to the American Medical Association with the recommendation that each state auxiliary, honor its medical profession in a similar way in its respective state.

Motion by Mrs. Benj. Bashinski, Macon, amended by Mrs. Jas. N. Brawner and Mrs. A. J. Mooney, carried to discontinue further loans to medical students other than those being assisted at this time until the loan fund reached the sum of five hundred dollars.

Mrs. M. M. McCord, Rome, Chairman of the Courtesy Committee, in behalf of all members, thanked every one who had in any way contributed to the success of the meeting.

Mrs. Chas. Usher, Savannah, Chairman of the Nominating Committee, submitted nominations for all elective offices. There being no nominations from the floor, motion by Mrs. Jas. N. Brawner carried to instruct the Secretary to cast the entire ballot for those nominated. Names of officers appear at head of department.

After the election, the President installed all officers: To Mrs. J. E. Penland, Waycross, President 1934-35, she presented the gavel with the statement: "And to you Madam President is entrusted the leadership of the Auxiliary, that through you our individual efforts may be unified in service to the

Medical Association of Georgia. Into your capable hands, I place the historic gavel, indicative of your office. The year is before you; may the ascent be always forward, but may there be no impediments or weariness on the journey! Our love and faithful cooperation will always be with you." Mrs. Penland made a most appropriate response.

The members of the Ware County Auxiliary presented Mrs. Penland with a corsage. The State Auxiliary and the Richmond County Auxiliary presented Mrs. White with two.

The annual banquet was given on Thursday evening, May 10. Mrs. W. W. Battey, Sr., broadcast from station WRDW, a salute and tribute from the medical Auxiliary to the members of the Medical Association of Georgia.

On Friday, May 11, Mrs. White made the third annual report of the Auxiliary to the House of Delegates of the Association on its educational work. A rising vote of thanks was given the Auxiliary for its excellent accomplishments.

#### TELFAIR COUNTY MEDICAL SOCIETY MEETING

The regular monthly meeting of the Telfair County Medical Society was held in the office of Dr. C. R. Youmans at Lumber City, Tuesday, July 10, at 3:30 p.m., with the following members present: Drs. J. W. Neal, W. H. Born, F. R. Mann, F. P. Harbin, C. R. Youmans and O. F. Collum.

At the conclusion of the business session Dr. J. W. Neal tendered his resignation as secretary of the Society which was accepted. After a most beautiful and impressive tribute by Dr. Born for the valuable and faithful services rendered the Telfair County Medical Society by Dr. Neal in the capacity of president as well as secretary, Dr. O. F. Collum was nominated and elected to fill his unexpired term.

The society was favored with two papers at this meeting which proved to be interesting and instructive. They were entitled as follows:

*Afflictions of the Anus and Rectum*, by Dr. W. H. Born; *Tonsillar Infection and Its Importance to the General Practitioner*, by Dr. F. R. Mann. These papers brought prolonged and lively discussions from every member present and proved to be another strong reminder of the importance of every member of the society attending all meetings and taking an active part in the scientific programs.

Our next meeting will be held at McRae, August 14, at 3:30 p.m., and all members are urged to be present.

O. F. COLLUM, M.D., Secretary

The Atlanta Cancer Clinic, located at the Georgia Baptist Hospital, Atlanta, was formally opened to the public with dedication exercises on June 1.

#### NEWS ITEMS

The Clarke County Medical Society met at Athens on June 8. Dr. J. W. Davis, Athens, read a paper entitled, *Abdominal Surgery in Children*; Dr. H. G. Banister, Ila, *Ulcer of Stomach and Duodenum*.

Dr. W. L. Mathews, Winder, was elected President of the Alumni Association of Emory University School of Medicine. Dr. Marion C. Pruitt, Atlanta, was re-elected secretary-treasurer. New members elected to the Board of Trustees were Dr. Ed. H. Greene, Dr. Howard Hailey and Dr. Chas. E. Hall, all of Atlanta.

Dr. J. R. Garner, Atlanta, was elected First Vice-Chairman of the Medical and Surgical Section of the American Railway Association at its meeting held in Washington, D. C., June 25 and 26. This automatically adds his name to the personnel of the Committee of Direction of the organization.

Dr. Ralph McCord, son of Dr. M. M. McCord, Rome, has just completed one year of rotating service at the Piedmont Hospital, Atlanta, and has been appointed house physician in the department of ophthalmology, laryngology and rhinology at Grady Hospital, Atlanta.

Dr. J. K. Fancher, Atlanta, vice-president of the Association for the Study of Internal Secretions, has been elected to Fellowship in the American College of Physicians.

For information in reference to an excellent location for a physician in one of the best agricultural sections of north Georgia, write the Secretary-Treasurer of the Association.

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, on June 21. Dr. Dan C. Elkin, Atlanta, presented patients, (1) *Carotid Aneurysm*, (2) *Femoral Aneurysm*. Dr. Avary M. Dimmock, Atlanta, gave a case report, *Pituitary Therapy of Alopecia*; Dr. LeRoy Childs, Atlanta, gave a clinical talk on *Gallbladder Disease*; Dr. Trimble Johnson, Atlanta, read a paper entitled, *Appendiceal and Cecal Stasis—Study of 200 Cases*. Discussions were led by Drs. Jas. J. Clark, Dan C. Elkin and R. B. Wilson, all of Atlanta.

The Telfair County Medical Society met at the office of Dr. W. H. Born, McRae, on June 12. Dr. O. F. Collum, McRae, read a paper entitled, *Anorexia or Cultivating a Child's Appetite*; Dr. W. H. Born, *A Successful Treatment for Tetanus or Lockjaw*.

The Tri County Medical Society, composed of Calhoun, Early and Miller counties, met at the Scout-Hut near Arlington on June 13.

Dr. J. R. Garner, Atlanta, has been appointed Visiting Professor of Forensic Medicine at the University of Georgia Medical Department, Augusta.

The Floyd County Medical Society met at Dr. J. T. McCall's camp on Big Cedar creek, near Rome.



on June 15. Dr. McCall entertained the members at a barbecue.

The Jefferson County Medical Society met at the office of Dr. L. R. Bryson, Louisville, on June 15.

The St. Joseph's Hospital, Savannah, in charge of the Sisters of Mercy, held its first quarterly clinic on June 19. Dr. Harry H. McGee read a paper entitled, *Diverticula of the Elementary Canal*; Dr. Ralston Lattimore, *Demonstration of Sphygmotonometer with Heart Cases and Sphygmotonometer Records*; Dr. Lee Howard, *Diagnosis of Pulmonary Fungus Infection with Demonstration of Cultures*; Dr. W. B. Crawford, *Surgical Aspect of Gastric and Duodenal Ulcer*; Dr. J. C. Metts, *Neurological Clinic*; Dr. John W. Daniel, *Medical Treatment of Peptic Ulcer*.

Dr. and Mrs. T. H. Brabson, Cornelia, entertained the members of the Habersham County Medical Society and the Auxiliary in their home on June 15.

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, on July 5. The sections of the American Medical Association session held at Cleveland, June 11-15, were reported in five minute talks by the following: *X-Ray* by Dr. Jas. J. Clark; *Pediatrics*, Dr. Joseph Yampolsky; *Proctology*, Dr. H. H. Askew; *Allergy*, Dr. Hal M. Davison; *Orthopedics*, Dr. Theodore Toepel; *Eye, Ear, Nose and Throat*, Dr. Dunbar Roy; *Obstetrics*, Dr. R. A. Bartholomew; *Heart*, Dr. Stewart R. Roberts; *Pathology*, Dr. Jack C. Norris; *House of Delegates*, Dr. C. W. Roberts; *Board of Trustees*, Dr. Allen H. Bunce. A scientific paper entitled *Cancer as We Find It in Georgia: Its Diagnosis and Treatment*, was read by Dr. J. L. Campbell; the discussion was led by Dr. T. F. Abercrombie, Dr. Cosby Swanson and Dr. Wm. P. Nicholson.

The Randolph County Medical Society met at the Patterson Hospital, Cuthbert, on July 5. Dr. Loren Gary, Jr., Shellman, read a paper on *Typhoid Fever*.

Dr. L. L. Whitley, Crawford, entertained the members of the Clarke County Medical Society to a barbecue at his summer camp near Winterville on June 28.

Dr. Theodore Toepel, Atlanta, read a paper before the Walker County Medical Society at Rossville on July 6, entitled *Arthritis*.

The post-graduate extension course sponsored by the Clarke County Medical Society, Medical Association of Georgia, Emory University School of Medicine and the University of Georgia Medical Department, will be held at Athens, July 30 through August 3.

Dr. W. Earl Quillian, Atlanta, was elected International President of the Civitan Club at its annual convention in Toronto, Canada, June 27.

The Clinical Forum held its regular meeting at the Academy of Medicine, Atlanta, on July 3. The scientific program consisted of titles for papers as follows: *Goiter—A Continuous Disease* by Dr. J. D. Martin

and Dr. Dan C. Elkin; *Malignant Hypertension—Case Report*, Dr. E. Van Buren.

The Atlanta Clinical Society announces the installation of officers for the coming fiscal year as follows: Dr. L. Minor Blackford, President; Dr. Vernon E. Powell, Vice-President, and Dr. W. H. Kiser, Jr., Secretary.

Dr. W. W. Blackman, Atlanta, read a paper before the Third District Medical Society at Americus on June 20, entitled *Arthritis*.

Dr. Jack Jones, Atlanta, has been elected to fellowship in the American Dermatological Society.

The Academy of Pediatrics announces the acquisition of new members as follows: Dr. Wm. W. Anderson, Dr. L. D. Hoppe, Dr. T. F. Davenport and Dr. Lee Bivings, all of Atlanta.

Dr. J. R. McCord, Atlanta, has been elected Chairman of the Section on Obstetrics of the American Medical Association.

Dr. Needham B. Bateman, Jr., announces the opening of his office at 523 Candler Building, Atlanta, for the practice of medicine and surgery.

Dr. Allen H. Bunce, Atlanta, Secretary-Treasurer of the Association, was invited to a testimonial dinner for Dr. James S. McLester, Birmingham, Alabama, President-Elect of the American Medical Association. The dinner was given in the Peacock Ballroom of the Tutwiler Hotel on July 7.

Dr. Thos. J. Charlton, Savannah, has been elected Assistant Commissioner of Health for Chatham County.

Post-graduate lectures sponsored by the Ware County Medical Society were given at Waycross during the week of July 2 by the following: Monday afternoon—Dr. Eugene E. Murphey, Augusta, spoke on *Types of Heart Failure*; Dr. J. H. Sherman, Augusta, *Treatment of Burns*. Tuesday afternoon—Dr. Joseph Akerman, Augusta, *Prenatal Care*; Dr. Wm. A. Mulherin, Augusta, *Nutritional Problems of Childhood*. Thursday afternoon—Dr. W. W. Battey, Augusta, *Surgical Diseases of the Abdomen*; Dr. J. R. Robertson, Augusta, *Transurethral Resection of the Prostate*. Friday afternoon—Dr. P. B. Wright, Augusta, *Common Foot Disorders*; Dr. C. M. Burpee, Augusta, *Acute Infections in Childhood*.

The Jackson-Barrow Counties Medical Society met at the Harrison Hotel, Jefferson, on July 2. Dr. S. A. Boland, Jefferson, read a paper entitled, *Some Practical Phases and Treatment of Rheumatism in Children*.

Dr. Hal M. Davison, Atlanta, has been elected to fellowship in the American Therapeutic Society.

Dr. Newdigate M. Owensby, Atlanta, has been appointed Professor of Psychiatry at the University of Georgia Medical Department, Augusta.

The medical staff of Emory University Hospital, Emory University, held a call meeting on July 2. Proposed plans for group hospitalization were discussed. Dinner was served.

Post-graduate lectures were given at Carrollton during the week of July 9-13, inclusive by the following: July 10, Dr. H. C. Sauls, Atlanta, *Blood Dyscrasias*; Dr. Lon Grove, Atlanta, *Diseases of the Colon*. July 11, Dr. C. W. Strickler, Atlanta, *Diseases of the Chest*; Dr. John F. Denton, Atlanta, *Cancer of the Uretus*. July 12, Dr. Jas. E. Paullin, Atlanta, *Arthritis*; Dr. Montague L. Boyd, Atlanta, *Treatment of Urinary Obstruction*. July 13, Dr. Edgar D. Shanks, Atlanta, *Cardiovascular Renal Diseases*; Dr. Fred G. Hodgson, Atlanta, *Treatment of Fractures*.

The Macon Medical Society met at the Macon Hospital, Macon, on July 3. Dr. Olin H. Weaver, Macon, spoke on *Intracranial Injuries*. Other members gave case reports.

The Clarke County Medical Association met at the Georgian Hotel, Athens, on July 6th. Dr. W. D. Gholston, Danielsville, was the principal speaker.

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, July 19th. Dr. Champ H. Holmes gave a case report entitled, *A Case of Bilateral Artificial Pneumothorax*; Dr. T. C. Davison gave a clinical talk on, *Summary of Thoracic and Goiter Surgery as of 1934*; Dr. J. Harris Dew read a paper entitled, *Posterior Vaginal Hernia—Report of Two Cases*. The discussions were led by Dr. W. E. Person, Dr. Ed Colvin and Dr. Jno. B. Duncan.

#### HONORING DR. WILLIS

Dr. G. W. Willis was the recipient of an unusual honor Friday afternoon when a large number of his friends gathered on the court house lawn and gave him a shower for his new hospital which is nearing completion. Gifts of many kinds that will be useful in the hospital were brought by friends.

A delightful program of music and readings had been prepared and were rendered. Miss Elizabeth Pharr gave a piano selection. Mr. Wilbur Sutton a song, and Miss Beverly Tucker a reading which brought her back for an encore.

The colored choir, numbering about twenty, sang several spirituals which were greatly enjoyed by those present.

The presentation of the gifts was by Mr. J. J. Flanders who expressed the deep appreciation that the people of Ocilla and Irwin county had for their family physician and friend. He paid tribute to his faithfulness and efficiency and expressed the love the people had for him.

A noteworthy feature of the occasion was that a large number of colored people were there, and many of these also contributed their gifts, stating that it was not so much the value of presents as the opportunity of showing their appreciation of the man.

Dr. Willis feelingly responded and declared that the occasion would cause him to rededicate his life to the service of the people as he had never been able to do before.

There were between two hundred and fifty to three hundred people at this shower.

#### DR. WILLIS SPEAKS

*To the dear good people of Ocilla and Irwin County:*

What can I say? Words are but emptiness when we want to express the deep emotions of the heart.

The beautiful and generous expression of your love and interest for me and our new little hospital so thrills me that words cannot express what the surprise shower meant to me.

For twenty-five years I have gone into the homes of the rich and the poor of our town and community, giving my best services to all, at times with no remuneration, except the satisfaction of rendering that service. I have learned through contact with suffering and sorrow, pain and tears, to love and sympathize with humanity the more.

This demonstration of your love, and confidence has enriched my life. Stimulated by your kind and tender sympathies, inspired by your interest and love, I shall as always have real happiness in serving you as the days go by.

From the depth of my heart I want to thank each and everyone who helped to make Friday, July 6th, one of the happiest days of my life.

Trusting that our little hospital, combined with our best service, shall be a great blessing to each of you, and assuring you that the memory of your tokens of love and appreciation shall linger with me, I am,

Your doctor,

G. W. WILLIS

P. S. Please remember I'm going to try to be the dog-gone good doctor that Mr. Flanders so graciously told you I am.

—*The Ocilla Times*, Ocilla, Ga.

July 12, 1934.

#### HONOR ROLL FOR 1934

1. Randolph County, Dr. G. Y. Moore\*, Cuthbert, December 12, 1933.

2. Macon County, Dr. Thomas M. Adams, Montezuma, January 13, 1934.

3. Henry County, Dr. H. C. Ellis, McDonough, January 18, 1934.

4. Wayne County, Dr. A. J. Gordon, Jesup, March 12, 1934.

5. Monroe County, Dr. G. H. Alexander, Forsyth, March 19, 1934.

6. Ware County, Dr. Kenneth McCullough, Waycross, March 19, 1934.

7. Turner County, Dr. J. H. Baxter, Ashburn, March 24, 1934.

8. Lamar County, Dr. J. M. Rogers, Barnesville, April 2, 1934.

\*Deceased.



## OBITUARY

*Dr. James Wilson Clements*, Subligna; member; Medical College of Virginia, Richmond, Va., 1864; aged 96; died after an illness of several months duration at his home on June 6, 1934. He was one of the oldest physicians in that section of the country and one of the last two survivors of the Confederate veterans of Chattooga county. Dr. Clements was widely known and loved by hundreds of acquaintances. He had been a member of the Chattooga County Medical Society and the Subligna Baptist church for many years. Surviving him are two daughters, Misses Lula and Lillian Clements; and one son, Ernest Y. Clements, all of Subligna. Funeral services were conducted from the Subligna Baptist church and burial was in the churchyard.

*Dr. William W. Pirkle*, Cumming; member; Emory University School of Medicine, Emory University, 1898; aged 64; died while enroute to a private hospital in Atlanta on June 8, 1934. He served at one time as Mayor of Cumming and had been otherwise prominent on political affairs. Dr. Pirkle was one of the outstanding physicians of Cumming and Forsyth counties. He had many friends and had served the people of his community well. Dr. Pirkle was a member of the Forsyth County Medical Society, Masons and the Baptist church. Surviving him are one daughter, Miss Lillie Bell Pirkle; three sons, Roy, Cecil and Broughton Pirkle, all of Cumming. Funeral services were conducted from the Baptist church by Rev. Charles Brown, Gainesville. Burial was in the city cemetery.

*Dr. William David Dorminy*, Fitzgerald; member; Atlanta College of Physicians and Surgeons, Atlanta, 1900; aged 63; died at his home after an illness of short duration on June 4, 1934. He was born and reared in Ben Hill county. He was one of the founders of Fitzgerald and had resided there since that time. Perhaps no one ever attained a higher position in the hearts of his clientele and fellowmen. He served for more than twenty years as Commissioner of Health of Ben Hill county and for many years Chairman of the Fitzgerald Board of Education. Dr. Dorminy had an extensive practice in Ben Hill and adjoining counties. He was a member of the Ben Hill County Medical Society, Masons, and the Central Methodist church. Surviving him are his widow, two sons, W. D. Dorminy, Jr., Avon Park, Fla., and Roy Dorminy, Fitzgerald; two sisters, Mrs. D. R. Henderson, Ocilla, and Mrs. J. D. Robison, Asheville, N. C.; six brothers, J. H., A. B., E. L., B. H. and J. A. Dorminy, all of Fitzgerald, and J. L. Dorminy, Raleigh, N. C. Funeral services were conducted from the Central Methodist church by Rev. J. Ed. Fain.

*Dr. Arthur J. Griffith*, Comer; University of Georgia Medical Department, Augusta, 1904; aged 57; died at his home on May 29, 1934. He was born and reared at Danielsville. After graduating in medi-

cine, he practiced at Comer until his death. Dr. Griffith had endeared himself to his clientele and acquaintances and enjoyed an extensive practice and the confidence of all who knew him. He was a member of the Presbyterian church. Surviving him are his widow, two daughters, Mrs. Franklin Fisher, Long Island, N. Y., and Miss Vivian Griffith, Comer; three sons, Emerson Griffith, Houston, Texas; Kendall and Rudolph Griffith, both of Comer. Funeral services were conducted from the Presbyterian church by Dr. C. I. Stacey. Interment was in city cemetery of Danielsville.

*Dr. George W. Wallis*, Fayetteville; member; Emory University School of Medicine, Emory University, 1886; aged 73; died at his home on June 17, 1934. He was born and reared in Fayette county. Dr. Wallis had practiced medicine there for forty-eight years, except for a few years he practiced in Carroll county at Whitesburg and at Columbus. He had taken post-graduate courses in New York and attended many clinics in Atlanta. Dr. Wallis was Chairman of the Fayette County Board of Health; President of the Clayton-Fayette Counties Medical Society; had served as county physician for Fayette county, and for a number of years as councilman of Fayetteville. He was known as a capable and successful physician. Dr. Wallis took an active interest in Sunday school and was a member of the Fayetteville Baptist church. Surviving him are his widow; three sons, Dr. H. G. Wallis, Columbus; G. W. Wallis, Jr., East Point; A. H. Wallis, Fayetteville; two daughters, Mrs. Will Cooksey, Columbus, and Mrs. Carl Pilcher, Fayetteville. Funeral services were conducted from the Fayetteville Baptist church by Rev. J. H. Coin and Rev. W. J. DeVardeleben, both of Atlanta. Burial was in the Fayetteville city cemetery.

*Dr. Albert S. J. Stovall*, Elberton; member; University of Georgia Medical Department, Augusta, 1886; aged 72; died at a private hospital on June 21, 1934. He was born in Ruckersville, Elbert county and was one of the first honor graduates when he received his medical degree. Dr. Stovall was one of the oldest practicing physicians of his home county. He had served in the upper and lower houses of the General Assembly of Georgia. Dr. Stovall was the first President of the Elbert County Medical Society when organized and a great humanitarian; member of the Elbert County Medical Society, Masons, Odd Fellows and the First Methodist church. Surviving him are his widow, three daughters, Mrs. Nell Willie, Elberton; Mrs. Arthur Booth, Elberton; Miss Francis Stovall, Atlanta; three sons, Pearce and Byron Stovall, Athens; and Lt. Sidney Stovall, Fort Bliss, Texas. Funeral services were conducted from the home by Rev. John F. Yarbough, assisted by Rev. John H. Mashburn. Interment was in Elmhurst cemetery.

*Dr. George W. Burnett*, Whitesburg; member; Southern Medical College, Atlanta, 1878; aged 81;

died at a private hospital in Carrollton on June 19, 1934. He was a native of Douglas county and removed to Whitesburg more than thirty years ago. Dr. Burnett was actively interested in public affairs and represented Douglas county in the lower house of the General Assembly of Georgia for several terms. He practiced medicine for more than fifty years before he retired. Dr. Burnett was a charter member of the Carroll County Medical Society, member of the Masonic lodge and Methodist church. Surviving him are his widow, one daughter, Mrs. T. W. Camp, Whitesburg. Funeral services were conducted at the graveside with Masonic honors. Members of the Carroll County Medical Society acted as an honorary escort. Burial was in the Whitesburg cemetery.

#### THE BORDEN DIGEST

An excellent resume of vitamin D milks forms the basis of Abstract No. 1089, in which it is pointed out that milk is an ideal carrier for the antirachitic vitamin D, and that irradiated milk and milk from cows fed on irradiated yeast are the most practical types of vitamin D milk, although all types have certain advantages.

The reason why milk is so readily enriched in vitamin D is because of the cholesterol present in its butter fat and protein, as explained in the article reviewed in Abstract No. 1090.

Milk is much more valuable as a source of vitamins than are vitamin concentrates, according to the report outlined in Abstract No. 1091. The importance of milk as a dietary source of sodium and chlorine, or common salt, is set forth in Abstract No. 1093.

School children who receive milk as supplementary fare have been conclusively proven to display improved growth and health over those who do not receive milk. In Abstract No. 1092, is a report of a comprehensive statistical study of 20,000 school children involved in a milk-feeding investigation in Scotland.

Acidophilus milk produces a beneficial effect upon the intestinal flora and the health of its consumers, according to the study mentioned in Abstract No. 1094. The presence of the B. Acidophilus plays no part in dental caries, as shown in Abstract No. 1095, which discusses caries in pregnant women, and states that pregnancy itself is not the cause of tooth decay.

#### Correction

In Abstract No. 1073 in our issue of May 1, 1934 there is a typographical error. 20 per cent cream and not 2 per cent was added to the milk used in the study of peptic ulcer reported.

#### THE MERCK MANUAL OF THERAPEUTICS

A new edition of The Merck Manual of Therapeutics and Materia Medica was presented June 11 to the medical profession at the annual meeting of the American Medical Association which convened in Cleveland.

Therapy in the new manual has been outlined by Dr. Bernard Fantus, Professor of Therapeutics, College of Medicine, at the University of Illinois.

In the new manual, therapy has been approached, not only as a science, but as an art. For this purpose ripe experience has been culled for the practical application of what has been emphasized so frequently, that the patient should be treated as well as the disease. This feature of combining "savoir faire" with medication and accessory regimen represents a departure from stereotyped therapeutics.

From an original two hundred and fifty pages in 1899, the Merck Manual has grown to one thousand, three hundred and seventy-nine pages in the present edition. The new edition, the sixth since the founding of the publication, has been entirely rewritten yet maintains the characteristics of preceding editions, which have made it the standard of reference manual for the majority of physicians, students, pharmacists and nurses.

A substantial portion of the new manual is devoted to the etiology, diagnosis and therapy of two hundred and fifty-seven pathological conditions, alphabetically arranged.

Over two thousand prescriptions with official constituents and metric equivalents are presented, along with a description of four hundred and seventy-five remedies, including solubility, action, uses, average dose, preparations, contra indication, incompatibilities.

Some of the new chapters among the two hundred and fifty-seven contained in the section on therapy are: Acidosis, Alkalosis, Backache, Botulism, Caisson Disease, Celiac Disease, Coronary Occlusion, Dyspnea, Encephalitis Lethargica, Food Poisoning, Freezing, Hay Fever, Infantile Convulsions, Myasthenia Gravis, Paroxysmal Tachycardia, Polycythemia Rubra, Tularmia and Urolithiasis.

#### COCOMALT

The importance of milk as part of the dietary in post-operative and convalescent cases cannot be overestimated. It is—and rightly so—the principle dependence of the diet.

But many patients have a natural dislike for milk, and others soon grow tired of the monotony of milk . . . milk . . . milk . . . day after day.

There is a way, however, in which the modern physician can overcome this aversion to milk—this distaste for a steady milk diet. The thing to do is to flavor the milk in a way that makes the color and taste interesting and inviting to the patient, yet does not alter the basic fundamentals of the milk itself.

Cocomalt, for example, converts milk into a delicious chocolate flavor food-drink that is tempting to the fussiest invalid. Even those who acutely dislike milk and refuse to drink it, welcome the refreshing flavor of Cocomalt. Not only does it tempt the sick and lagging appetites by its palatability: *Cocomalt substantially increases the nutritive value of milk.* Every cup or glass of Cocomalt a patient drinks (made as directed) is equal in food-energy value to almost two glasses of milk alone.

Furthermore, Cocomalt does not tax the digestion. It can be taken frequently. It is easily digested and



quickly assimilated even by those whose digestive systems are impaired. Cocomalt contains, also, a rich supply of Sunshine Vitamin D and is accepted by the American Medical Association, Committee on Foods.

### SUMMER DIARRHEA IN BABIES

Casec (calcium caseinate), which is almost wholly a combination of protein and calcium, offers a quickly effective method of treating all types of diarrhea, both in bottle-fed and breast-fed infants. For the former, the carbohydrate is temporarily omitted from the 24-hour formula and replaced with 8 level table-spoonfuls of Casec. Within a day or two the diarrhea will usually be arrested, and carbohydrate in the form of Dextri-Maltose may safely be added to the formula and the Casec gradually eliminated. Three to six teaspoonfuls of a thin paste of Casec and water, given before each nursing, is well indicated for loose stools in breast-fed babies. Please send for samples to Mead Johnson & Company, Evansville, Indiana.

### COCOMALT

Investigators who have made a special study of fatigue and general debility report that these conditions generally can be corrected by proper diet and rest.

Proper diet, according to the report, is defined as meaning *adequate, well-balanced nourishment*. Not over-eating for that burdens the digestive system, causes sleeplessness and further complicates the condition.

Cocomalt mixed with milk provides extra food-energy value without digestive strain. Its high caloric value and easy digestibility make it especially effective in helping to throw off that nervous, devitalized feeling of which so many patients complain—unless, of course, there is some serious chronic ailment which must be corrected.

Cocomalt is accepted by the Committee on Foods of the American Medical Association. Laboratory analyses show that Cocomalt, when made as directed, increases the protein content of milk 45 per cent—the carbohydrate content 184 per cent—the mineral content (calcium and phosphorus) 48 per cent. It contains not less than 30 Steenbock (81 U. S. P. revised)

units of Vitamin D per ounce—the amount used to make one glass or cup. It is licensed by the Wisconsin University Alumni Research Foundation.

Sanford R. Gifford (Journal A. M. A., July 7, 1934), discusses the therapy of conjunctivitis as it is practiced by the members of the attending staff of the Cook County Hospital. The phases of the subject discussed include: conjunctivitis due to chemicals, acute catarrhal conjunctivitis (pink eye), gonorrheal conjunctivitis (ophthalmia neonatorum) and chronic catarrhal conjunctivitis.

## WRITING AND EDITING SCIENTIFIC AND LITERARY PAPERS

Editorial assistance by a graduate of Columbia University, B.A. Degree. Experienced in the Editorial Department of the American Institute of Medicine, (Publisher of the International Medical and Surgical Surveys); and author of manuscripts carefully typed in form for submission for publication. The Journal of the Medical Society of New Jersey, and literary publications.

*Inquiries answered promptly.*

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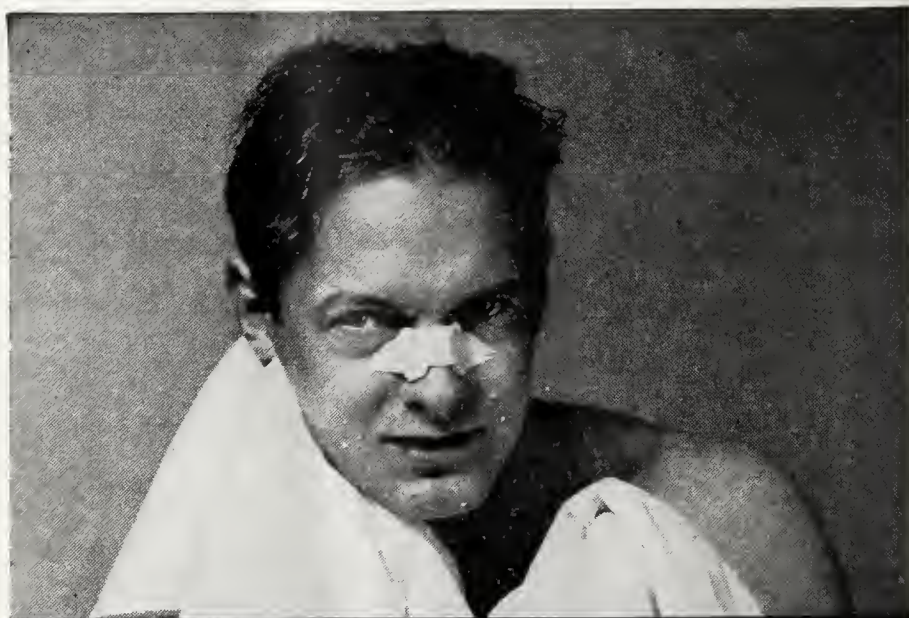
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## HYPOTHYROIDISM WITH SPECIAL REFERENCE TO TYPES\*

ERNEST F. WAHL, M.D.  
*Thomasville*

Hypothyroid states are described in all standard text books as classical myxoedema, while the so-called "simple hypothyroidism" or incomplete myxoedema is casually mentioned. In my opinion the stress should be placed on the atypical types of hypothyroidism since fully developed cases of myxoedema can hardly be missed if it is kept even vaguely in mind. It is the purpose of this paper to illustrate a number of atypical cases and review briefly the symptoms of myxoedema.

One is struck by the fact that the onset of myxoedema is always insidious except when following operations for removal of part of the thyroid gland, in which case it may be rather acute. The first symptoms may be mental or involve the skin or subcutaneous tissues. The change in the subcutaneous tissue was once thought to be due to an increased deposit of mucin since analysis showed the presence of fifty times the normal amount. The present belief is that the change is produced by the formation of tissue not unlike granulation tissue, containing an increased number of nuclei and fibrils, and an amorphous substance in the lymph spaces resembling mucus.

The first change usually appears in the face, especially around the eyes, eyelids, cheeks, chin and neck where there is a thickening of the skin and subcutaneous tissue, giving it a broad, flat, puffy appearance. This often leads to a diagnosis of nephritis. However, this new tissue of myxoedema does not pit on pressure like ordinary edema. The

skin often has a yellowish color. Flushing of the cheeks on this yellow background has been described as an "apple blossom" appearance. The skin is dry due to atrophy of the sebaceous glands.

As the disease progresses, the cheeks become flabby, the lips thick with the lower one occasionally everted, the nose broad and the ears large and thick. The eyelids may become so thick that the forehead is wrinkled in an effort to keep the eyes open. There is an increase in the amount of subcutaneous tissue over the entire body. In addition to this, in some cases, pads may form over the cheeks, above the clavicles, in front of the neck and thorax and over the abdomen and genitals. The hands become large and thick, resembling the "spade hand" of Gull. The hair becomes dry, brittle and falls out. By the same process the nails become thick and brittle.

Some degree of mental change is invariably present. Usually there is a relatively early weakness or loss of memory. All mental processes become slow and indecision is evident. Physical activities also become slow, some patients resembling a hibernating animal. It is difficult to fix and hold their attention and this trait, along with the lack of endurance, eventually incapacitates them. In advanced cases, the gait becomes clumsy because of the thickened tissues but this is not a frequent occurrence. Headache is a very common complaint. Cramps in the muscles and extreme hypersensitiveness of the skin and subcutaneous tissues may be the chief complaint. Some authors attribute this to an associated insufficiency of the parathyroid glands. It is true that such cases usually have low serum calcium but thyroid extract alone will usually effect a cure. Hallucinations are not infrequent and any type of neurosis may occur.

\*Read before the Medical Association of Georgia, Augusta, May, 9, 1934.

Any one or all of the special senses may be involved. Auditory disturbances result from infiltration of the membranes of those organs. Speech is muffled or husky and taste and smell may both be affected. Neuroretinitis, which improved under thyroid administration, has been reported. Myxoedematous patients cannot stand cold weather but are quite happy and comfortable at temperatures that are too warm for normal people. The body temperature may normally run 96 or 97 degrees, and 98 degrees represent a fever.

Hypothyroidism affects the circulatory system in varying degrees. The pulse is usually slow, ranging from 40 to 60 beats per minute. Persistent hypotension should always arouse suspicion regarding the thyroid gland. However, it is possible for rather advanced hypothyroidism to exist without either a strikingly slow pulse or low blood pressure. Only recently has hypothyroidism been stressed as a cause of myocardial failure. Cases are recorded illustrating marked enlargement of the heart in all diameters with return to normal size after the administration of thyroid extract.

About fifty per cent of the cases of myxoedema present a marked secondary anemia. Some of the cases show an increase in the lymphocytic elements. Loss of appetite with an increase in body weight is of common occurrence. Constipation is usually obstinate, but at times there is an equally obstinate diarrhea. Bizarre abdominal symptoms clinically referable to the colon may disappear under thyroid therapy. These abdominal symptoms are undoubtedly due at times to the associated hypochlorhydria which is not an uncommon finding.

Menstruation may be normal, decreased or irregular. Sterility is frequent but not uniform. Improvement has been noted during pregnancy but this is probably due to the increased nutrition rather than to any remote effect of the fetal thyroid. Repeated miscarriages have been known to be caused by hypothyroidism.

At this point I wish to call attention to the fact that a basal metabolic reading below minus 10 does not always mean that the patient is suffering from hypothyroidism. A

low metabolic reading is sometimes found associated with a number of disease conditions but usually does not reach the low degree commonly found in patients suffering from frank hypothyroidism. Among these conditions, the most outstanding is undernutrition. Advanced stages of undernutrition commonly have metabolic readings ranging from minus 15 to minus 20 or even minus 23 unless accompanied by a fever. A somewhat reduced metabolic reading is occasionally found in the late stages of hypopituitarism when there is a rapid gain of weight. McKinlay's work suggests that this is due to synergism between the pituitary and thyroid glands. The somewhat low readings that are occasionally found in diabetes mellitus are more often influenced by the state of nutrition than by the disease. Some cases of Addison's disease show a low metabolic reading. Theoretically, there is a basis for this since epinephrin is known to be one of the accelerators of heat production. A slightly reduced metabolism is occasionally found following oophorectomy. Again the question of interrelation between the thyroid gland and the ovaries is brought up but many of these patients do not improve on the administration of thyroid extract.

Of 15,355 admissions to the John D. Archbold Memorial Hospital from July 1, 1925, to January 1, 1934, a diagnosis of hypothyroidism was made in 90 patients (0.58 per cent), which contrasts with 97 (5.6 per cent) in a group of 1,726 cases studied in my office. This variation is partly accounted for by the children, obstetrical cases and large number of surgical patients that make up the hospital group. Those studied in my office were all medical cases. Another very important cause of the low incidence in the hospital group is brought out by the number of cases reported in certain years. There were 18 cases in 1929, 24 in 1930, 12 in 1931 and only 3 in 1933. This coincides with the increase in the surgical mortality rate and both are due to the same cause, i. e., during the period of economic distress it was almost impossible to get medical cases to enter a hospital, and a great many surgical patients consented to hospitalization only after complications had appeared.



The following group of cases is made up largely of the type sometimes referred to as "chronic complainers," and all had been treated for years without relief. The facts in each case represent a boiled down summary of a long case record. All the cases were thoroughly studied. In this group I was impressed by the number having definite focal infection and one might speculate as to whether the infection suppressed the thyroid secretion. Another striking feature was the disproportion between the symptoms and metabolic reading in some cases.

### Case Reports

#### 1.

Mrs. Wm. B. T., obese white female of 47 years. Weighed over 200 pounds for ten years. Two children alive and well. No miscarriages. Never perspired since she gained weight. Three years ago began to lose energy and strength, and suffered constantly with aching pains in the back of the legs and neck. Two years ago all teeth were said to be abscessed and were removed. Aches and pains were worse after each group of teeth was pulled. Eighteen months after all teeth had been removed, she complained of the same aching and lack of strength. The voice had been husky for a year. There was extreme constipation. She finally reached a point where she could do nothing but sit in a chair.

The general features were typical of myxoedema. Height 64 inches, weight 182 pounds, average temperature 97°, average pulse rate 70. B.P. 104/68. Subcutaneous tissues were very tender. Basal metabolism minus 34; blood serum calcium 8 mgm. per 100 cc.

On thyroid extract and calcium by mouth, she improved steadily but did not reach a point where she felt normal for twelve months although the metabolism was normal after the first three months.

#### 2.

Mrs. E. V. G., a well-developed and nourished white female of 50 years, complained of lack of energy, constipation and neuritis. She had had wandering pains for four years, somewhat relieved two years before by removal of abscessed teeth. Lack of energy was progressive. All tissues of the body were so sensitive that she was in constant fear of someone accidentally touching her. B.P. 120/80, height 63 inches, weight 130 pounds. Average temperature 98°, average pulse 64. No obvious characteristics of hypothyroidism. All subcutaneous tissue extremely tender to the slightest touch. Basal metabolism minus 34; blood serum calcium 7.8 mgm. per 100 cc.

There was immediate rapid improvement on thyroid extract and injections of parathormone, and health has since been normal. All hyperaesthesia disappeared when the blood calcium and metabolism became normal.

#### 3.

E. O., white female of 35 years, complained of pain in various parts of the body, extreme fatigue and lack of perspiration.

In 1919 pain in left shoulder relieved by removal of tonsils. Vasomotor rhinitis for many years. During last year had fleeting pains in various parts of body. For several months had noticed progressive lack of endurance. No difficulty in forenoon but in middle of afternoon became absolutely exhausted, not being able to complete the day's work on several occasions.

Physical examination showed one abscessed tooth. Basal metabolism minus 19; blood serum calcium 7.5 mgm. per 100 cc. B.P. 120/80, height 63½ inches, weight 117 pounds. Average temperature 97.8°, average pulse 76. There was no clinical evidence of hypothyroidism.

On thyroid extract, grs. II daily, calcium gluconate by mouth and extraction of the abscessed tooth, improvement was unusually rapid. The vasomotor rhinitis has entirely disappeared as have the fleeting pains. Her employer states her efficiency has increased 100 per cent.

#### 4.

Mrs. F. F., white female of 38 years, referred by family physician because she had been acting queerly for six to eight months and for the past two months had accused her husband of having sexual intercourse with an eighteen-year-old daughter by a former marriage. This presented an odd triangle since the husband was only three years older than the stepdaughter.

Physical examination revealed a typical picture of myxoedema. B.P. 120/80, height 62½ inches, weight 130 pounds. Average temperature 98°, average pulse 68. B.M.R. minus 36.

On five grains of thyroid extract daily, the patient became normal mentally and would not believe she had made accusations against her husband.

#### 5.

Mrs. J. C., white female of 50 years, came for examination in 1928, complaining of lack of endurance and energy, and recurrent eczema of skin around the eyes. This dermatitis had a tendency to occur more frequently in the spring and fall but was often present in the winter. The lesions were characterized by itching and swelling for two or three days, then irritation and desquamation for weeks. There was usually an accompanying rhinitis. Many dermatologists had failed to relieve her.

Physical examination showed a slender, well-developed white female of 50 years. Skin dry and hair coarse. Around each eye was a zone of reddish desquamation 2 cm. wide. B.P. 120/80, height 64 inches, weight 121 pounds. Average temperature 97.8°, average pulse 74. There was no other clinical sign of hypothyroidism.

Skin tests showed positive reactions to orris root, rice powder, lobster, oyster, ragweed giant and small, pecan, maple and perennial rye grass. Basal metabolism minus 25. On no other medication than thyroid extract, the patient has been free from skin disturbances

and rhinitis since this date and has had a normal amount of energy.

Two years later I saw a sister of this patient with a diffuse dermatitis. Basal metabolism was minus 24. The dermatitis disappeared when the metabolism reached normal.

## 6.

Mrs. P., a thin, white woman of 55 years, was admitted to a widely known medical center when the writer was resident physician, complaining of insomnia, weakness in the forenoon, flight of ideas, a general feeling of unrest and various phobias. She was studied and observed by an internationally known internist for two weeks. Since no positive findings appeared in the study of her case and a psychiatrist agreed on the diagnosis of neurasthenia, she was given a rest cure. There was slight improvement after two months treatment.

In some way this patient escaped a basal metabolism. This test was later done in another hospital and found to be very low. On thyroid extract she promptly became a normal person.

## 7.

R. W., white male of 45 years, was seen in 1927, complaining of recurrent attacks of sore throat. In 1925 he had arthritis in the right knee which was relieved by removal of the tonsils. One year ago he developed a streptococcus sore throat and since that time had considerable cough and hoarseness. There had been a moderate amount of expectoration early in the morning. He had noticed considerable loss of energy the last twelve months.

Examination revealed a tall, thin, undernourished white male of 45 years, coughing frequently. B.P. 114/82, height 71½ inches, weight 148 pounds. Average temperature 98°, average pulse 68. There was much postnasal discharge. The entire pharynx was injected. Scattered moist rales were heard over the entire chest. The respiratory infection was considered the cause of the hoarseness, and treatment was given accordingly. However, several months later, after the infection cleared, the hoarseness persisted.

Basal metabolism showed minus 33. On five grains of thyroid extract daily, his voice became clear and would remain so throughout a speech lasting thirty minutes. Since the basal metabolism became normal he has had no severe respiratory infection and his endurance is excellent.

## 8.

Mrs. T. C. M., white female of 35 years, came complaining of pain in the lower abdomen of many months duration. She insisted that otherwise she felt perfectly well.

A consultant found the abdominal pain to be due to chronic salpingitis. Because of the thickness and dryness of the skin, and the obvious slow mental process, a basal metabolism was done. This showed a reading of minus 34; blood serum calcium 11 mgm. per 100 cc. Height 62½ inches, weight 170 pounds. Average temperature 97.8°, average pulse 80.

She was given thyroid extract, grs. IV daily, and

instructed to return in four weeks. She returned before the appointed time, stating that after taking thyroid extract for two weeks she began to realize that she had not been normal for one or two years but the change had been so insidious that she had not noticed it until she felt the effect of treatment. The change here had been chiefly poor memory, slowing of mental processes and depression. On thyroid extract she has remained well for four years.

## 9.

Mrs. G. F. S., white female of 37 years, was referred for study in 1927 with a diagnosis of chronic appendicitis but offered as her chief complaint "poor eyes." Two years before she had a sudden acute pain in the eyes. This was constantly present in some degree but was especially severe when she tried to read. She consulted eye specialists in four of the larger southern cities and was given many pairs of glasses but never could wear any of them more than a few weeks. Some said trouble was due to muscles of eyes while others attributed it to her general condition but did not suggest what that might be. Her weakness was attributed to chronic malaria.

Examination showed an obese white woman of 37 years. B.P. 100/60, height 64½ inches, weight 165 pounds. Average temperature 98.2°, average pulse 60. Subcutaneous tissue thick. Hair sparse and dry. Moderate secondary anemia was present and there was an absence of free hydrochloric acid in the gastric contents. Basal metabolism minus 21.

After the basal metabolism reached normal she was able to get glasses which were satisfactory. She became quite alert, the hair became moist and the skin lost the indurated character. She continues to feel well when taking thyroid extract.

### Treatment

The treatment of hypothyroidism has been said to consist merely of prescribing thyroid extract, but I do not believe this is entirely true. The same general principle that governs any therapeutic procedure applies to the treatment of this disease, i. e., the body as a whole should be taken into consideration and an attempt made to correct all abnormalities as well as those related to the thyroid gland. A considerable number of these patients are apparently not pure hypothyroids but a polyglandular dystrophy. In such patients the administration of thyroid extract picks them up to a certain level but the improvement seems to stop at a point just under what the patient considers "feeling normal." The administration of anterior pituitary extract in many of these cases furnishes the finishing touch. In recent years pure thyroxin has been advocated as a substitute for thyroid ex-



tract but in my experience I have had better results with a reliable brand of thyroid extract than with thyroxin. Another striking fact is that a patient's need for thyroid extract may vary from time to time. One of the cases here reported requires at times six grains of a reliable extract daily in order to feel well while at other times, without changing his mode of living or without any other known change, he is quite well on two grains daily and this is not due to the accumulation following prolonged large doses. A maintenance dose can gradually be worked out for other patients and continued without a change for a long period of time. An effort should be made to bring the metabolism slowly up to normal over a period of weeks. No one factor controls the dosage of thyroid extract for a given patient. The necessary dose varies in each individual and no rule can be made for patients with the same basal metabolism, sex, height and weight. The amount of thyroid extract some patients with only a moderately low basal metabolism require is sometimes striking. The response to treatment should be judged by the clinical response, the resting pulse rate, the basal metabolism and the body weight.

### *Conclusions*

Hypothyroid states not presenting the clinical picture of myxoedema occur with sufficient frequency to warrant routine basal metabolisms on patients who present themselves for diagnostic study. It has been said that this condition occurs more commonly in the cold climates than in the warm but my experience has been exactly opposite to this. Chronic arthritis and focal infection occur in a very large percentage of these cases.

### *Discussion on Paper by Dr. Ernest F. Wahl*

DR. V. E. POWELL (Atlanta): The important symptoms of hypothyroidism can be readily understood if it is remembered that, owing to a lack of thyroxine, all of the activities of the body are reduced. Lowered production of body heat is invariably present, and expressed by a decrease in the rate of oxidation within the tissues. The temperature, therefore, is subnormal. Decreased oxidation calls for decreased respiratory activity, so that pulmonary ventilation, consumption of oxygen, and output of carbon-dioxide, are diminished.

There is a similar decrease in circulatory activity. As the tissues need less oxygen, the heart pumps less blood at each systole, and the pulse pressure decreases. There is also a slowing of the heart rate.

The channels of heat loss are: first, the evaporation of water from the lungs and the skin; and, second, the radiation and conduction of heat from the surface of the body. In hypometabolism, each of these channels is impaired. Decreased metabolic activity causes decreased sweating, peripheral constriction of the vessels, and chilliness.

Other functional alterations are considered characteristic of the hypothyroid state. They are probably also dependent upon the primary metabolic fault. Chief among these is a retardation in the rate of growth of all tissues, as shown in the adult, for example, by decreased hemopoiesis, resulting in anemia; and slower growth of hair and nails.

Reduced irritability and reactivity of the nervous systems will occur. Illustrations in the central nervous system are diminished perception of sound, impaired memory, and diminished reflexes. In the vegetative nervous system, diminished secretory and peristaltic actions.

There is a diminished rate of exchange of calcium and phosphorus. These substances are deposited in greater concentration in the bones, and eliminated less freely in the stools and urine, than in the normal individual, although the actual concentration in the blood is not greatly altered. Since thyroid extract causes the exchange of these elements to return to normal, I do not see the rationale of calcium feeding in Dr. Wahl's cases, other than the finding of somewhat lowered calcium readings in the blood.

Another finding is the altered distribution of the body fluids, particularly in myxoedema. The total plasma volume decreases, and the storage of water in the tissues increases. Nitrogenous excretion in the urine is low, and it has been shown that there is an increase of protein deposited in the body. The myxedematous individual generally gains weight from increased storage of water, nitrogen, and fat.

Of course, there are many other departures from the normal function in hypothyroidism, such as a raised renal threshold for the excretion of sugar. As all of these conditions are reversed in hyperthyroidism, and cured by thyroid medication, it is logical to ascribe them to a lack of thyroxin.

Is it any wonder, then, with so much functional pathology present in hypothyroidism that the symptoms are so varied and numerous? The essayist has given us 9 examples presenting different clinical pictures. In some of his cases there were few or no symptoms to suggest hypometabolism, except possibly the symptom of extreme fatigue. Practically every case will complain of weakness, lack of endurance. The allergic manifestations mentioned—vasomotor rhinitis and eczema—might possibly be accounted for by the disturbed behavior of colloids, crystalloids, and proteins, in this disorder. These symptoms are not common, however, and the cases are instructive and interesting. Students of arthritis have long applied themselves to the problem of causal relationship between hyperthrophic arthritis and hypothyroid states. Since the etiology of hypothyroidism is not under-

stood today, it is as fair to postulate that focal infections inhibit the gland, as it is to believe that with an underfunctioning gland, the general resistance to infection is lowered. Against this is the fact that hypothyroidism occurs with a much greater frequency in women, in a ratio of 5 to 10 females to one male. And in women the onset is prone to coincide with or follow some event in the sexual life. The woman is less fortunate than the man in this respect, what with menstruation, childbirth, menopause, and the inescapable operations on the pelvic viscera.

Dr. Wahl states that there is no positive relationship between the intensity of symptoms and the degree of lowered metabolism. It should be emphasized that there is no fixed level for metabolism, even for normal persons. Neither is there any proof that a person is better off with a basal rate of minus 8 than with one of plus 6 per cent. Many apparently healthy persons habitually show a rate well below the arbitrary minus ten per cent. Some myxedematous patients will become symptom-free with rates of minus 18 to 20 per cent. We must, therefore, bear in mind such symptoms and signs as may be taken to be the direct expression of alterations in the metabolic rate, and separate them from those which are not. Dr. Wahl wisely stated that many of these patients are not pure hypothyroids, but probably polyglandular dystrophies. In women particularly may the symptom signify the break-down of some delicate inter-endocrine balance in which the thyroid is but one of several members.

To miss a case of myxoedema is little short of a diagnostic calamity, for it is one of the few diseases for which we possess a specific cure. That cure may be summed up in one word: thyroid.

DR. HAL M. DAVISON (Atlanta): There are cases of hypothyroidism that we always diagnose because their symptoms are so evident, but the interesting cases are those cases with mild hypothyroidism, which present symptoms for which no other cause may be found. It is in this type of case that the basal metabolism test should be used as a routine method of diagnosis.

I do not believe that we can accept the reading of minus 10 to plus 10 as a normal range for the basal metabolic rate. Any error in the reading is always on the plus side, so when we obtain a reading of minus 5 to minus 10, and we find some clinical symptoms of hypothyroidism, it is well to consider this reading as evidence of hypothyroidism.

In giving the thyroid tolerance test, we believe that the method used by Dr. Fancher's clinic in Atlanta (Good Samaritan Clinic) to be the best, that is, to begin with a small dose, and to increase the daily dose by 1/10 grain until some toxic symptoms appear. This method requires a longer time, but it is safe, for signs of mild hyperthyroidism can be recognized before the patient has received enough thyroid extract to cause trouble.

The amount of thyroid extract that is required to keep a patient in thyroid equilibrium varies a great deal in different cases of hypothyroidism. We have

seen one patient with a post-operative myxoedema who required less than two grains a day to keep the patient in equilibrium, and when two grains of thyroid extract were administered, symptoms of hyperthyroidism developed. This patient had a basal metabolic rate of minus 30. Unfortunately, the basal metabolic rate is not a definite index to the amount of thyroid extract required for treatment, and a case of mild hypothyroidism with a basal metabolic rate of minus 10 to minus 15 may require a relatively large amount of thyroid extract a day.

Not all these cases are dull mentally and not all are overweight. I recall one boy 14 years of age who gave a basal metabolic reading of minus 12. He was markedly underweight, uncooperative both at school and at home, and very irritable, but was mentally alert. His skin was very dry and similar to that occurring in ichthyosis. The administration of thyroid extract in the proper doses changed the clinical picture entirely. He gained weight. His skin became soft and moist, and he became a different child at school and at home.

The blood pressure, so often referred to as being low in cases of hypothyroidism, is often quite low in those cases occurring in early life, but in middle life or beyond, a patient may have an increase in blood pressure instead of a decrease, and the blood pressure may return to normal after the proper treatment with thyroid extract.

In selecting a thyroid extract for treatment, it will be well to remember that although the British thyroid extract is a good product, it is only one-fifth as strong as the American product. The patient should be instructed to obtain the thyroid extract in the original bottle and to continue the use of the same product all the time.

DR. J. K. FANCHER (Atlanta): Dr. Wahl's position that mild hypothyroidism is much more frequent than pronounced hypothyroidism is well taken. The diagnosis is still a matter of clinical judgment. We yearn for a definite diagnostic test, particularly in cases of endocrine dyscrasia. When the basal metabolism test was first brought out, it was considered diagnostic for hypothyroidism, and the first variation was minus 10 to plus 10, for normal fluctuation. It is now thought that it is more normal to make that minus 20 to plus 20. The Goetch test which formerly was employed as a thyroid diagnostic agent, has been demonstrated as inefficient.

Sexton of St. Louis has tried it on 500 cases and has given it up, and we have tried it on 200 cases and given it up.

I might add a few clinical observations, in the discussion of this paper of Dr. Wahl's.

Sometimes the cases of under-stature, if hypothyroid, grow very rapidly. I had a case of a boy nineteen and a half years old, and four feet six inches tall who had not grown perceptibly in 9 years. Under thyroid extract in one year he grew six inches.

Another thing which might throw us off on diagnosis is the speech of some of these cases. The rapidity



of speech has nothing to do with the thyroid efficiency.

Still another factor which might throw us off in our calculations is the presence of involuntary muscular movements. These have no effect on the basal metabolic rate, whatever. The presence of hypothyroidism in its mild form is much more common than myxoedema, and is often unrecognized, and I feel that Dr. Wahl is to be commended for bringing this point to our attention.

DR. E. F. WAHL (Closing): I appreciate very much the discussion, because many points were brought out which time did not permit me to read in the latter part of the paper.

As to the metabolic reading, we certainly cannot make a red line where a hyperthyroidism or a hypothyroidism starts or stops. In a number of cases we have found that where there is reason to question a basal metabolism, a blood-cholesterol will almost always give a higher reading, in hypothyroidism, if the blood sugar is not high.

One frequently hears that the treatment of hypothyroidism consists of the administration of thyroid extract. I believe that the same thing applies in this as to other diseases. The body as a whole should be taken into consideration, and any infection or other abnormal finding should be corrected, if possible.

Someone may criticize this manuscript on the basis of focal infection causing the pains and discomforts. Perhaps I have not clearly indicated it in the manuscript, but in no case did the discomfort disappear after the infection had been removed. They will have a return of the same symptoms today if thyroid extract is omitted for a few weeks.

## MINUTES OF THE MEDICAL ASSOCIATION OF GEORGIA

### HOUSE OF DELEGATES

TUESDAY AFTERNOON, MAY 8, 1934

The first session of the House of Delegates of the Eighty-Fifth Annual Session of the Medical Association of Georgia, held May 8-11, 1934, at the Richmond Hotel, Augusta, Georgia, convened at 2:45 o'clock, Dr. Charles H. Richardson, Macon, the President of the Association, presiding.

*President Richardson:* The House of Delegates will please come to order. Is there a quorum present, Mr. Secretary?

*Secretary Bunce:* There is a quorum present.

*President Richardson:* The roll call is next.

The roll was called, and the following members responded:

Charles H. Richardson, Macon, President.  
Clarence L. Ayers, Toccoa, President-Elect.  
W. W. Turner, Nashville, Second Vice-President.  
Allen H. Bunce, Atlanta, Secretary-Treasurer.  
John W. Simmons, Brunswick, Parliamentarian.  
Olin H. Weaver, Macon, Delegate to the A.M.A.

J. A. Redfearn, Albany, Chairman of Council.  
C. Thompson, Millen, Councilor, First District.  
Kenneth S. Hunt, Griffin, Councilor, Fourth District.  
W. A. Selman, Atlanta, Councilor, Fifth District.  
H. G. Weaver, Macon, Councilor, Sixth District.  
J. E. Penland, Waycross, Councilor, Eighth District.  
Grady N. Coker, Canton, Councilor, Ninth District.  
S. J. Lewis, Augusta, Councilor, Tenth District.  
H. M. Fullilove, Athens, Councilor, old 8th District.  
William R. Houston, Augusta, Chairman of Committee on Scientific Work.  
Dan Y. Sage, Atlanta, Chairman of Committee on Public Policy and Legislation.  
Frank K. Boland, Atlanta, Chairman of Committee on Medical Defense.  
J. L. Campbell, Atlanta, Chairman of Cancer Commission.  
B. H. Minchew, Waycross, Chairman of Advisory Committee—Woman's Auxiliary.

DELEGATES	COUNTIES
Lewis E. Abram, Fitzgerald	Ben Hill
Charles C. Harrold, Macon	Bibb
J. D. Applewhite, Macon	
R. L. Miller, Waynesboro	Burke
G. H. Lang, Savannah	Chatham
R. V. Martin, Savannah	
D. H. Garrison, Tate	Cherokee
C. C. Brannen, Moultrie	Colquitt
R. F. Wheat, Bainbridge	Decatur-Seminole
W. S. Cook, Albany	Dougherty
W. H. Lucas, Stillmore	Emanuel
W. P. Harbin, Jr., Rome	Floyd
H. H. Askew, Atlanta	Fulton
M. T. Benson, Atlanta	
J. J. Clark, Atlanta	
J. C. Massee, Atlanta	
C. W. Roberts, Atlanta	
George W. Fuller, Atlanta	
R. B. Lamb, Demorest	Habersham
J. W. Story, Perry	Houston-Peach
S. T. R. Revell, Louisville	Jefferson
H. G. Lee, Millen	Jenkins
Charles L. Hicks, Dublin	Laurens
H. M. Tolleson, Hahira	Lowndes
H. C. Derrick, Oglethorpe	Macon
I. J. Parkerson, Eastman	Ocmulgee-Bleckley-Dodge, Pulaski
W. G. Elliott, Cuthbert	Randolph
A. A. Davidson, Augusta	Richmond
George A. Traylor, Augusta	
Marvin M. Head, Zebulon	Spalding
W. B. Heller, President	Stephens
W. B. Schaefer, Toccoa	
E. C. Herman, LaGrange	Troup
W. F. Reavis, Waycross	Ware
N. J. Newsom, Sandersville	Washington
D. L. Wood, Dalton, Alternate	Whitfield
R. H. Smith, Lincolnton	Wilkes
W. A. Mulherin, Augusta, Ex-President.	
C. K. Sharp, Arlington, Ex-President.	

Louis Hamman, Baltimore, Maryland, a guest of the Association, was also present.

*President Richardson:* The Chair wishes to appoint the following members of the Reference Committee. I presume that all of you are familiar with this Committee. It is a Committee to which any matters are referred which do not go to any other committee.

*Reference Committee*

C. W. Roberts, Atlanta, Chairman.

H. M. Tolleson, Hahira

J. D. Applewhite, Macon

C. Thompson, Millen

S. J. Lewis, Augusta

First Vice-President Applewhite took the chair.

*Chairman Applewhite:* The first order of business is the report of our President, Dr. Richardson.

President Richardson read his report:

REPORT OF THE PRESIDENT

On May 12, 1933, my term of office as President of the Medical Association of Georgia began. Probably no recipient of this high honor in recent years received his orders under more unfavorable economic conditions. And the year which is now closing has been one which has been beset with many difficulties for the medical profession along with the rest of the world.

New problems have arisen which call for greater endeavor to aid in their solution, and there is offered to organized medicine today a challenge to prove its right to perpetuate its established order and traditions. All about us are those who tell us that the private practice of medicine has failed, and that society can only be furnished adequate medical care through some group plan, governmental, or otherwise.

On one side they show us large numbers of our population who are not receiving adequate medical service either because they are unable to pay for it, or are improvident in providing for the emergencies of life; and on the other hand a medical profession with an over-supply of doctors, and a large amount of idle time on its hands, and no longer able to secure the comforts of living through the avenues of their chosen vocation.

With these ideas passing to and fro through one's mind, it is most interesting and refreshing to get out into the great open spaces, and ride from one end of this state to the other, as I have done in the past year, and shake hands with the man in the ranks and find what he is thinking about, and how much he is disturbed by the changing order.

It has been a wonderful revelation and most refreshing to find out how complacent and cheerful he is in the midst of his difficulties, and I can truthfully report to you today that he is carrying his load with a smile, and without complaining. Apparently he is not disturbed by the spectors of state or group medicine; it is still too remote to interest him, and he has so much trouble at his own door that it is difficult to interest him in any perspective beyond the local horizon.

But several things have impressed me as I have studied the lives of these men.

In the first place we have too many doctors, and particularly a bad distribution of the profession. There is too much tendency to congregate in the larger centers. This should be corrected by a definite program of education to limit the number of applicants for entrance into medical schools, and better efforts at correct distribution, by making life in the rural communities more attractive and profitable. We must encourage community hospitals so that every practicing physician may have access to laboratory and x-ray diagnosis and a place to treat his patients under more favorable conditions.

We must see that the average physician keeps abreast of scientific knowledge and progress by opportunity for post-graduate study, and I feel strongly that we should have in each councilor district of this state a definite annual program of post-graduate study, planned and sponsored by the state medical association, and aided by extension courses from the medical schools of the state, and that the ultimate goal should be that membership in the county and district society should be contingent upon such a course.

We should at once begin an effort to bring the Commonwealth Fund into our state, which is now operating in several other southern states, and which not only pays for a course of post-graduate study in a medical center for the rural physician, but pays him for his time while he is taking it. The one requisite is that he must agree to go back to his own community when he has finished it.

I think this House of Delegates should really take some steps toward definite plans to definitely bring into the state the Commonwealth Fund. It is now operating in Mississippi, Tennessee and many other states in this Union, and it is a fund that is left by the will of the late Edward Harkness, a brother-in-law of John D. Rockefeller, and the compass of the fund has been extended to the entire country. They not only pay a man's expenses for taking a post-graduate course, but they pay for his time in doing it. They also come to a community and put up two-thirds of the amount of money required for a community hospital, provided the community will put up the other one-third and will agree to maintain it, or satisfy them to that effect.

The great improvement in the district society, both in attendance, interest and scientific program has impressed me profoundly. There is a well organized district society in each councilor district of this state, and I believe that the interest in these meetings has been much enhanced by the presence and cooperation of the Woman's Auxiliary.

This latter organization has rendered much valuable service, particularly through its Public Relations Committee, in interpreting the work and value of the services of the medical association to the lay public, and deserves our sincere thanks and appreciation. As an appreciation of this and these other valuable services I think our organization should offer an annual hon-



orarium to help defray the travelling expenses of the President of that organization.

In explanation of that I want to say this: Naturally as I have traveled over the state I have met the President of the Woman's Auxiliary, and she has done as much or more traveling than I have. She has traveled all over the state this year at her own personal expense. That is not fair. The Woman's Auxiliary hasn't the money to finance that. It takes all the money they can rake and scrape to put in their student loan fund. I feel that this organization should recognize the work that they are doing, and should at least contribute an honorarium of a definite sum to defray the traveling expenses of the President of the Woman's Auxiliary.

At a meeting of the Council of the Association held in Atlanta on October 5 it was agreed that the Association would cooperate with the Federal government in furnishing medical service to persons on Federal relief rolls at a reduced schedule of fees. Such a schedule was adopted and submitted to the Georgia Relief Commission, and was accepted, with the exception of the proviso for mileage beyond established limits. This has worked a hardship, particularly upon the men in the rural districts and the whole scheme has proven unsatisfactory. I feel that the plan should be revamped and to that end I suggest that this body petition the Federal relief forces in this state that a survey of the whole problem be made through the use of Federal funds and the organization of our State Board of Health. In order to solve this problem satisfactorily we must have a clear understanding of the exact nature of the problem and scientific data and research upon which to proceed. Such a survey would be of inestimable value to our Committee on Medical Economics, and a careful study of the Michigan plan would serve as a guide.

I feel sure I am violating no confidence when I tell you that the officers of your Association have had a conference with the Federal Relief Administrator in this state in regard to this very matter, and they are inclined to look upon it very favorably. I think I can promise you that if this organization will petition the Federal Relief Administrator in this state for a medical economics survey, to be financed by Federal funds and possibly put on through the organization of our State Board of Health, and name a budget, definitely, in other words, the amount of money which will be required to put on this survey, the funds will be forthcoming.

I think that is one of the finest things that we could have at the present time. If we are going to solve this problem of the low cost of medical care, we have got to know the facts, we have got to know just exactly how many people in this state need that sort of service, just how much they are able to pay, and just how much the per capita income is all over the state, and how much the medical income is over the state. It is just as necessary to know how much the doctors are making as how much the recipient of the service is making.

This survey can and will be made, if this Association will ask for it, and to that end I should like to see a committee appointed to make a recommendation, possibly, at the next meeting of the House of Delegates, in the form of a resolution.

It has been most encouraging to see the widespread interest that has been aroused by our discussion of Eugenic sterilization, and I am convinced that this part of our program can be carried to successful completion through adequate propaganda. Apparently our citizens are realizing that society must prevent the continued propagation of the mentally unfit, if race degeneration is to be avoided.

To that end I suggest that our Committee on Public Policy and Legislation take under consideration the drafting of appropriate legislation which shall embody the following: First the sterilization of all persons committed to insane institutions before they are allowed to leave; second, the sterilization of those committed to institutions for the feeble-minded; third, that sterilization be made a part of parole and pardon in the case of confirmed criminals; and fourth, that some provision be made in state institutions for voluntary sterilization of those, who on account of economic conditions, or ill health, are unfitted for further child-bearing. It has been proven that such a statute, properly drawn, is constitutional.

It has always seemed to me that the scientific sessions of our annual meeting should be entirely divorced from the business and political side of it and to that end I respectfully suggest that the By-Laws of our Association be changed placing the election of the officers of our Association in the House of Delegates. This in my opinion would be a more representative way of doing it, and is the plan now used by our parent organization, the American Medical Association.

When you first think about that, it does not appeal to you, certainly not to many of you. It did not to me, because we are democratic in our ideas and thoughts, and we feel that everybody should have a right to vote. But as a matter of fact, the only way that a man can really promise himself that he can and will vote in this organization is through his elected representative. This House is the most representative body that we have, and it certainly is the fairest way that I can think of to elect your officers.

All of you know the story, that on the last day of the session a larger percentage of the men have gone home, a few people who are particularly interested stay over, and the local men are there. I will say we have gotten along wonderfully well with the system we have had, but it places in the hands of the minority the opportunity to control this organization if it should so wish to do.

I just ask you to think about that, and if it interests you, well and good. If it doesn't, it just represents my feeling in the matter.

Here is something that I just had to put in, and you can smile at it and let it go, if you wish.

And finally I am wondering if the Association could not find some use for the continued and permanent services of that group which I shall soon join, the ex-presidents of this organization. I have visioned them as a permanent Board of Trustees to study from year to year matters of principle and policy, to make recommendations upon such matters as may be of general interest to the welfare of the profession, and to act in an advisory capacity when called into council.

I asked one of my good friends what he thought of that, and he said, "Well, I think it will be just another damned committee," and possibly it will, but in making the suggestion or giving the thought it is done in good spirit, and it means just this, that I do not think that such body should have any authority at all. Please do not misunderstand me. I think they should act in an advisory capacity. It seems that such a body might be appointed in this organization for life, to study principles of policy, and submit their recommendations to this body from time to time.

In closing I should like to take this opportunity to offer my deep appreciation to every official and fellow worker in this great medical family of ours. It has been my observation that each one has done his assigned task to the best of his ability. No one could have asked for better cooperation, and the consideration which I have received everywhere, has made, what might have been otherwise, a task of drudgery, an interesting and delightful experience.

As I look back upon the year I can see many things that might have been done better, but I feel satisfied that all of us have done the best that our limited ability afforded and I shall carry with me only pleasant memories.

CHAS. H. RICHARDSON, *President*.

President Richardson resumed the chair.

*President Richardson:* The next is the report of the First Vice-President.

*First Vice-President Applewhite:* Mr. President and Members of the House: The thing for the Vice-President to do is to do what he is called upon to do by the President. We have had such an efficient President that I have just been called on to associate with him at several meetings during the year. It has been a pleasure to be associated with him in this work.

*President Richardson:* The next is the report of the President-Elect.

President-Elect Ayers read his report:

#### REPORT OF PRESIDENT-ELECT

I have endeavored during the past year to study the Association's affairs, rather than to make it a year of too much activity. Have attended the meetings of the Council, and such other work as I was requested to do. It has been my privilege, and pleasure to attend three or four district meetings, all of which had splendid scientific programs and excellent social features.

It has been a source of gratification during the past few years to observe the great improvement in the programs rendered at the various district societies.

Some of these societies had speakers of national reputation, and the home talent was excellent.

I am convinced that the twenty district meetings held over the state each year are rendering a service to the profession that no other societies in the state could approximate. In most rural counties the county medical societies are so small and their meetings so infrequent that they serve only as a nucleus for organization, however, this is not the case in all counties. Some of them have very interesting meetings, but the district society fills in the gap in an excellent way between the county society and the state meeting. I would like to recommend that the dates of the meetings of various districts be so arranged that there will be no conflict of dates, and the district meetings a few days apart.

This year the First and Ninth Districts met on exactly the same day, and the Fifth District had its meeting on the following day.

I think the Council could work out a schedule that would be satisfactory to all.

One of the district meetings which I attended this year met at Alto as guest of the State Tuberculosis Hospital, which gave all present an opportunity to observe not only the very efficient management of the hospital, but also the highly scientific work that is being done by this institution. I have had occasion to observe the work there on several occasions and wish to commend it to the profession of Georgia in the highest terms, and ask of our physicians their united support of this splendid institution.

Also wish to ask your cooperation with the State Board of Health in their various health activities.

Have also had the privilege of observing two or three of the meetings of the Woman's Auxiliary and to note the splendid and constructive work they are doing. Our Association is certainly under obligations to them for their valuable help along the lines of preventive medicine.

The profession has been practicing medicine during the past twelve months under very unusual conditions. This is perhaps the first time during any of our professional lives that the Federal Government has rendered any direct aid in caring for the indigent sick. We all realize that there are certain features in connection with the Federal relief work that should be corrected, especially the mileage feature, but on the whole their help has certainly been very beneficial and many physicians have profited very materially from it, and at a time when it was badly needed. If they had not aided, the physicians would have of necessity cared for this class of practice without any compensation, just as they always have done. However, we hope the day is not far distant when Federal aid will be unnecessary not only in medicine, but other lines of activity as well.

As physicians interested in preventive medicine we can not escape our responsibility along political lines. It is our duty to question the aspiring candidates as to their stand on matters pertaining to health and if they are not willing to support measures sponsored by



organized medicine then support some candidate who will. We need a few more good doctors in the legislature.

Hope our Association will continue to be loyal to the best interest of organized medicine.

C. L. AYERS

*President Richardson:* The next report is that of the Second Vice-President.

Second Vice-President Turner read his report:

#### REPORT OF SECOND VICE-PRESIDENT

Although my activities for the past year have been limited mainly to my home territory, on October 5, 1933, I attended a call meeting of the officers and Councilors of the Medical Association of Georgia, for the purpose of discussing, adopting and formulating a fee schedule to be presented to the Federal Emergency Relief Administration. The results of this meeting need not be reported. We are well aware of its outcome.

On October 10, 1933 I attended the meeting of the Eighth District Medical Society at Valdosta. The meeting was held at the Valdes Hotel. The attendance was very good and we had a few visitors from other societies. We also had the pleasure of having Dr. Chas. H. Richardson, our President with us at that time.

The scientific program consisted of several good papers. Dr. Geo. F. Eubanks presented an excellent paper, *Some Interesting Proctologic Problems*, and also Dr. Richardson presented a paper on, *The Diagnosis and Management of Diseases of the Biliary Tract*.

Following the scientific program the district society was entertained at a banquet given by the Lowndes County Medical Society and the Auxiliary, at which time Dr. Richardson explained the inauguration of the Federal Emergency Relief organization, and its expected service to the doctors of our state.

On April 10, 1934 I attended the meeting of the Eighth District Medical Society at Douglas, Ga. The meeting was held at the Elks Club. Our program at that time was above the average and considerable discussion followed the reading of each paper. The society was entertained following the scientific program, at a banquet, in the dining room of the Ducoff Hotel.

W. W. TURNER.

*President Richardson:* The next report is from our Parliamentarian.

Parliamentarian Simmons read his report:

#### REPORT OF PARLIAMENTARIAN

Your Parliamentarian has pondered for two sessions past as to what manner of report was, or could be expected from an official who did no fixed detail work, was entrusted with no delegated executive duties between meetings, who was not concerned with the collection and disbursement of any funds, but who simply sat as an advisory officer concerned only with the smooth running of parliamentary procedure under your Constitution and By-Laws at each annual session. But your Secretary has been most insistent that a written report be rendered, without suggestion as to its

content or import. Suddenly it occurred to me that brief comment on the instruments under which you conduct the affairs of the Association, and some suggestions of slight changes that might increase the efficiency of those instruments, and which might prove of benefit to the membership at large of the Association.

For eighty-five years as a chartered and incorporated organization your Constitution and By-Laws have served you faithfully and efficiently, because of the fact that from time to time, as the exigencies of the various circumstances have required, you have not hesitated to re-write them, revise them, or amend them to suit your purposes—would to God we had had the same sense in dealing with the antiquated and obsolete instrument under which as a commonwealth we are struggling. Much honor is due the founders of this Association and those wise and faithful officials and delegates, who first framed our Constitution, and who, from time to time have altered it, respectively, to suit the times, and the demands of them, in which they lived.

The proposed amendments to the Constitution and By-Laws to be introduced at this meeting, changing the time of election of officers and shortening the scientific meetings to two days, are bound to meet the approval of those to whom time means money and expense sometimes is a burden, yet who are seeking fellowship and improvement in our annual meetings.

Before I was acquainted with the proposed amendment shortening the scientific sessions to two days, I had fully resolved to suggest that either the Tuesday's or the Friday's session of the House of Delegates be absorbed in some way into one of the days allotted to the scientific program, either by longer hours of meeting, or some special hours devoted to the business session. It has always occurred to me that the program of the first annual session of the House of Delegates, with reports from all officers and standing and special committees, together with other important announcements, should prove as important and interesting for and to the attending membership at large as to the House of Delegates. And those whose habit it is to not arrive at the annual meeting until Wednesday or Thursday morning—and this includes many duly qualified delegates—thus miss much of the interesting and important transactions of the Association. The wisdom of such a suggestion is borne out by the fact that attendance on Tuesday afternoon's session and the last session on Friday morning is pitifully small as compared with the potential attendance from component society delegates who might come later and leave earlier during the annual meeting. The inclusion of either of these sessions—and preferably the Tuesday's session—in the program of Wednesday or Thursday, would save a day and night of time for the attending delegates, and I believe would result in more interest being taken by the delegates in the business of the Association. As proof of the paucity of delegates, many of you will recall that at the last Savannah session two years ago, only two delegates from

the eighth district remained in attendance at the Friday session, and these two had to nominate a district councillor. There were present from the district only the nominee and his nominator. It appeared ridiculous, but it was a fact, nevertheless.

*President Richardson:* The next is the report of the Secretary-Treasurer, Dr. Bunce.

#### REPORT OF SECRETARY-TREASURER

*Secretary Bunce:* Mr. President, Members of the house of Delegates: On account of the length of the report of the Secretary-Treasurer, covering much of the financial detail, I have taken the liberty of giving you a short abstract.

First, during the past year we have lost forty members by death. Last year we lost fifty, which was the high mark in our Association, showing that we have reached the peak of losing our older members. We need not dwell on this further, since we have set aside a special time on Thursday for memorial exercises.

Second, membership. On May 1, 1932, we had 1101 members; on May 1, 1933, 911 members; on May 1, 1934, 1223 members, showing that our membership has begun to increase again. That, of course, means that those are members who are paid up and in good standing at that time. Many pay up after May 1 and before the end of the year. For example, on December 31, 1932, we had 1501 members; December 31, 1933, 1588 members, and we believe that on December 1 of this year we will reach another high peak in our membership, since we have many more now than we had last year at this time.

Third, county societies. On May 1 of 1933, we had 72 component societies in which 78 counties had representatives. On December 31 of that year, 1933, we had 91 component societies, representing 104 counties. On May 1 of this year we had received dues from 79 component county societies, representing 89 counties. In several instances two or three counties have combined and formed one society. Notwithstanding this fact, we see that much more organization work is necessary, since Georgia has many more counties than we have represented in our membership.

Another subject under membership and county societies in the State Association is fellowship in the American Medical Association. The Medical Association of Georgia, as is true of most other southern states, has a very small percentage of fellowship in the American Medical Association. Just why this is, I presume is because our members are not as much interested in the American Medical Association as they are in some other sections of the country. In some states they have as high as eighty-nine and ninety per cent, while we have only thirty-some-odd per cent of fellows in the American Medical Association. The Journal of the American Medical Association and the special journals certainly give very much for the fellowship dues, and subscription to any of these journals of course pays fellowship dues.

Dr. Bunce read the financial statement:

#### FINANCIAL STATEMENT

May 1, 1933—April 30, 1934

##### Receipts

May 1, 1933—cash in bank .....	\$ 5,506.86
May 1, 1933 to April 30, 1934—receipts .....	13,664.68
Total.....	\$19,171.54

##### Disbursements

May 1, 1933 to April 30, 1934.....	\$12,207.65
April 30, 1934—cash in bank.....	6,963.89
Total.....	\$19,171.54

#### DISBURSEMENTS

May 1, 1933 to April 30, 1934

NO.	NAME	AMOUNT
1984—	M. M. McCord, M.D., Rome Expenses incurred as Councilor for visiting county societies, telegrams phone calls, postage and stenographic work .....	\$ 29.67
1985—	J. A. Redfearn, M.D., Albany Expenses incurred as Councilor for the fiscal year ending April 30, 1933.....	20.00
1986—	Alliance Printing Co. Printing and mailing 1850 copies of the April, 1933 Journal .....	277.20
1987—	Alliance Printing Co. Binding 11 volumes of 1932 Journals .....	\$15.25
	2,000 Reprints — Greatest Value for Georgia Doctors....	5.25 20.50
1988—	Service Engraving Co. Making cut from photo of Dr. Chas. H. Richardson and repairing electro for ad .....	4.16
1989—	Southern Bell Telephone & Telegraph Co. Telephone account to April 11, 1933 .....	17.45
1990—	Herff-Jones Co. "Badge of Service" for the retiring President, Marvin M. Head, M.D. ....	3.32
1991—	Southern Engraving Co. Repairing cuts for advertisers .....	1.35
1992—	Addressograph Co. Ribbon and B. Alloy plates for Ad- dressograph .....	2.66
1993—	The Letter Shop Multigraphing letters to doctors on program, delinquent members, officers of Woman's Auxiliary, county secre- taries in reference to delegates and to report paid members, county secre- taries forwarding Delegates Creden- tial's cards, and for Dr. Jas. E. Paullin in reference to program .....	14.60
1994—	Bryan, Middlebrooks & Carter, Attys. Attorneys' fee for Hull, Barrett & Willingham, Attys. in suit of Mary Lucretia Herrington vs. Dr. Wm. A. Mulherin and for one-half cost of re- porting trial of case .....	217.50
1995—	Allen H. Bunce, M.D. Salary as Secretary-Treasurer for April, 1933 .....	150.00
1996—	H. L. Rowe Salary as Executive Secretary for April, 1933 .....	175.000
1997—	O. W. Roberts, M.D. Telephone account to promote the leg- islative program of the Association....	7.10



NO.	NAME	AMOUNT	NO.	NAME	AMOUNT
1999	Lloyd Sign Co. Seven signs for the Macon session.....	20.50	2022	Wm. H. Myers, M.D. Payment on expenses as delegate to Milwaukee session of the A. M. A., June 12-16, 1933.....	100.00
2000	F. J. Greene Night watchman for commercial ex- hibits at the Macon session.....	10.00	2023	C. W. Roberts, M.D. Payment on expenses as delegate to Milwaukee session of the A. M. A., June 12-16, 1933.....	100.00
2001	H. L. Rowe Expenses at hotel, meals and trans- portation for the Macon session.....	20.45	2024	O. H. Weaver, M.D. Payment on expenses as delegate to the Milwaukee session of the A. M. A., June 12-16, 1933.....	100.00
2002	Cash Paid for incidental expenses of gen- eral meetings, commercial and scientific exhibits, wire to Dr. Chas. C. Harrold at Johns Hopkins, Baltimore, drapery, tape, janitors and taxi, Macon session..	14.97	2025	Alliance Printing Co. Printing and mailing 1850 copies of the May, 1933 issue of the Journal....	276.94
2003	Miss Annie Jacks Commission on advertising contract....	6.25	2026	The Master Reporting Co. Reporting the Macon session, May 9-12, 1933 with original transcript and carbon copy—Postage \$8.24.....	308.24
2004	R. E. Carter Expenses to and from Macon and op- erating latern during the Macon session	35.00	2027	Addressograph Sales Agency Replacing broken and worn parts in Addressograph .....	11.67
2005	Frank K. Boland, M.D., Treasurer A. W. Calhoun Lectureship. Payment of part of expenses of Dr. Merrill C. Sos- man, Boston, Mass., invited to deliver the A. W. Calhoun Lecture at Macon session .....	50.00	2028	Miss Annie Jacks Commission on advertising contracts..	50.39
2006	Jas E. Paullin, M.D. Postage used in preparing program for Macon session .....	7.35	2029	E. K. Large, Postmaster Postage .....	30.00
2007	Miss Annie Jacks Commission on advertising.....	29.39	2030	Service Engraving Co. Copper halftones and etching for illus- trations and repairs on electros for ad- vertisers .....	24.10
2008	E. K. Large, Postmaster Postage .....	30.00	2031	Alliance Printing Co. Printing and mailing 1750 copies of the June, 1933 issue of the Journal..	269.33
2009	Southern Bell Tel. & Tele. Co. Telephone account to May 11, 1933..	6.90	2032	Bryan, Middlebrooks & Carter, Attys. Expenses of Mr. Grover Middlebrooks to and from Jesup in trial of suit of Mrs. Cilla Warren vs. Doctors Colvin and Ritch .....	28.09
2010	Southern Press Clipping Bureau News clippings furnished during April and May, 1933.....	10.00	2033	Southern Bell Tel. & Tele. Co. Telephone account to June 11, 1933..	6.00
2011	Bennett Printing and Stamp Co. 500 Badges for the Macon session.....	30.70	2034	Benj. F. Stovall Multigraphing letters in reference to Steiner Ward at Grady Hospital, At- lanta, mailed to officers, chairmen of committees of the Association and hospitals in the state .....	2.40
2012	J. N. Reisman Rent for May and June, 1933.....	35.00	2035	Allen H. Bunce, M.D. Salary as Secretary-Treasurer for June, 1933 .....	135.00
2013	Service Engraving Co. Copper halftones, zinc etching used as illustrations and repairs on electros for advertisers .....	32.68	2036	H. L. Rowe Salary as Executive Secretary for June, 1933 .....	157.50
2014	Alliance Printing Co. 600 copies of program for Macon ses- sion .....	69.84	2037	M. M. McCord, M.D. Expenses incurred to attend the meeting of the Council in Atlanta, June 29, 1933 .....	10.00
2015	The Letter Shop Multigraphing notices for delegates to the Macon session.....	1.50	2038	J. E. Penland, M.D. Expenses incurred as Councilor to at- tend a meeting of the Council in At- lanta, June 29, 1933.....	11.90
2016	Lester's, Inc. Twine, typewriter paper, cards, type- writer ribbon and pencils.....	7.45	2039	E. K. Large, Postmaster Postage .....	30.00
2017	Western Union Telegraph Co. Telegraph account to June, 1933.....	.56	2040	Miss Annie Jacks Commission on advertising.....	3.15
2018	Hotel Dempsey Co. Room for two days for Dr. O. C. Wenger, Hot Springs, invited guest at Macon session.....	7.00	2041	E. K. Large, Postmaster Postage .....	30.00
2019	Bryan, Middlebrooks & Carter, Attys. Attorney's fee for Hull, Barrett & Willingham, Attys., Augusta, in suit of W. E. Rawlings vs. Dr. C. D. Ward, Augusta, and court cost.....	158.00	2042	J. N. Reisman Rent for July and August, 1933.....	28.50
2020	Allen H. Bunce, M.D. Salary as Secretary-Treasurer for May, 1933.....	135.00	2043	J. F. Thompson Engraving Co. 2,000 letterheads and 2,000 envelopes for Dr. Chas. H. Richardson, Presi- dent of the Association .....	27.50
2021	H. L. Rowe Salary as Executive Secretary for May, 1933.....	157.50	2044	Southern Bell Tel. & Tele. Co. Telephone account to July, 11, 1933	8.05

NO.	NAME	AMOUNT	NO.	NAME	AMOUNT
2045	Southern Press Clipping Bureau News clippings for June, July, 1933..	10.00	2069	Southern Bell Tel. & Tele. Co. Telephone account to Sept. 11, 1933..	6.00
2046	Service Engraving Co. Cuts for illustrations and repairs on electros for advertisers .....	12.19	2070	J. F. Thompson Engraving Co. Engraving 148 letters on the L. G. Hardman Silver Cup—"Dr. Roy R. Kracke for work in Hematology" .....	6.66
2047	Allen H. Bunce, M.D. Salary as Secretary-Treasurer for July, 1933 .....	135.00	2071	J. N. Reisman Rent for September, October, 1933..	28.50
2048	H. L. Rowe Salary as Executive Secretary for July, 1933 .....	157.50	2072	Southern Press Clipping Bureau News clippings for Aug., Sept., 1933	10.00
2049	The Letter Shop Multigraphing letters in reference to automobile insurance, Crawford W. Long Memorial Prize, letters for Dr. Cleveland Thompson to doctors invit- ing them to attend meeting at Vadalua, signature plate for Dr. Chas H. Rich- ardson, President of the Association..	13.50	2073	Atlanta Envelope Co. 10,650 envelopes for mailing Journal	38.02
2050	E. K. Large, Postmaster Postage .....	30.00	2074	Miss Annie Jacks Commission on advertising .....	2.02
2051	Alliance Printing Co. Printing and mailing 1950 copies of the July, 1933 issue of the Journal....	285.07	2075	Allen H. Bunce, M.D. Salary as Secretary-Treasurer for September, 1933 .....	135.00
2052	Lester's, Inc. Pencils, Gem clips, typewriter ribbon and twine .....	5.40	2076	H. L. Rowe Salary as Executive Secretary for September, 1933 .....	157.50
2053	Alliance Printing Co. 200 Reprints for Dr. O. C. Wenger, Hot Springs, guest of the Association at Macon session .....	18.13	2077	The Letter Shop Furnishing stock and multigraphing 1100 cards mailed to delinquent mem- bers; multigraphing letters for Dr. Chas. H. Richardson, President, mailed to officers of county and dis- trict societies in reference to Woman's Auxiliary; multigraphing letters in reference to the Federal Emergency Re- lief Administration .....	10.40
2054	E. K. Large, Postmaster Deposit for postage to mail Journal....	25.00	2078	Alliance Printing Co. Printing and mailing 1750 copies of the Sept., 1933 Journal .....	276.71
2055	Bryan Middlebrooks & Carter, Attys. Expenses of Mr. Grover Middlebrooks to and from Jacksonville, Fla., to rep- resent Dr. T. H. Smith, Valdosta, when depositions were taken for plaintiff in suit of Miss Ida Davis vs. Dr. T. H. Smith .....	38.60	2079	Western Union Telegraph Co. Telegraph account to Oct. 1, 1933....	3.18
2056	Gibson-Ray 6,000 letterheads and 6,000 envelopes for committees and officers .....	43.00	2080	S. J. Lewis, M.D. Expenses incurred as Councilor .....	20.00
2057	American Surety Co. of N. Y. Premium on surety bond for Homer L. Rowe from September 6, 1933 to September 6, 1934 .....	5.00	2081	J. E. Penland, M.D. Expenses incurred as Councilor .....	18.80
2058	The Letter Shop Multigraphing two sets of letters to secretaries of county societies .....	2.95	2082	E. K. Large, Postmaster Postage .....	30.00
2059	Service Engraving Co. Copper cuts used for illustrations ....	3.69	2083	Chas H. Richardson, M.D. Honorarium for President, 1933-34..	150.00
2060	Southern Bell Tel. & Tele. Co. Telephone account to Aug. 11, 1933	6.00	2084	J. F. Thompson Engraving Co. 10,000 No. 10 envelopes .....	31.36
2061	Allen H. Bunce, M.D. Salary as Secretary-Treasurer for August, 1933 .....	135.00	2085	E. F. Griffith, M.D. Refund for excess payment on dues for 1934 .....	1.00
2062	H. L. Rowe Salary as Executive Secretary for August, 1933 .....	157.50	2086	Alliance Printing Co. Printing and mailing 1800 copies of the October, 1933 issue of Journal....	273.00
2063	Miss Annie Jacks Commission on advertising .....	2.02	2087	Southern Bell Tel. & Tele. Co. Telephone account to Oct. 11, 1933..	18.70
2064	Alliance Printing Co. Printing and mailing 1750 copies of the August, 1933 issue of the Journal	269.06	2088	Bryan, Middlebrooks & Carter, Attys. Fee for Franklin & Langdale, Attys., Valdosta., in suit of Mrs. Ida Davis vs. Dr. T. H. Smith, Valdosta, \$200. expenses of Grover Middlebrooks, Atty., attending court at Valdosta, \$38.76; cost for reporting case in Federal court, \$60.00 .....	298.76
2065	E. K. Large, Postmaster Postage .....	30.00	2089	Lester's, Inc. Paste, T. W. ribbon, pencils and wrapping paper .....	6.45
2066	Western Union Telegraph Co. Telegraph account to Sept. 1, 1933....	.47	2090	The Letter Shop Multigraphing letters with signature to officers of county societies in refer- ence to fee schedule of the Federal Emergency Relief Administration; let- ters to delinquent members and for- mer members .....	6.35
2067	E. K. Large, Postmaster Postage .....	30.00	2091	Allen H. Bunce, M.D. Salary as Secretary-Treasurer for October, 1933 .....	150.00
2068	Service Engraving Co. Work on electros for advertisers .....	1.90			



NO.	NAME	AMOUNT	NO.	NAME	AMOUNT
2092—	H. L. Rowe Salary as Executive Secretary for October, 1933	175.00	2115—	Southern Bell Tel. & Tele. Co. Telephone account to Dec. 11, 1934	11.40
2093—	Miss Annie Jacks Commission on advertising and col- lecting	4.52	2116—	E. K. Large, Postmaster Postage	30.00
2094—	E. K. Large, Postmaster Postage	30.00	2117—	Gibson-Ray 10,000 letterheads	23.00
2095—	H. M. Fullilove, M.D. Expenses incurred as Councilor to at- tend hearing—Cobb County Medical Society vs. Doctors Allen, Garrett and Welch, Nov. 1, 1933 at Marietta	7.00	2118—	Ivan Allen-Marshall Co. Pencils, index tabs and rubber bands	3.15
2096—	Service Engraving Co. Cuts used as illustrations	59.91	2119—	The Letter Shop Multigraphing three sets of letters; to delinquent members; to county secre- taries in reference to Directory; to county secretaries with blanks attached for reporting officers and members for 1934	5.80
2097—	E. K. Large, Postmaster Postage	30.00	2120—	Allen H. Bunce, M.D. Salary as Secretary-Treasurer for December, 1933	150.00
2098—	Dr. J. B. Thompson, Sec'y. Dues refunded for six months at \$1.50 each, paid on 1933 dues when remittance should have been for \$7.00 each	9.00	2121—	H. L. Rowe Salary as Executive Secretary for December, 1933	175.00
2099—	M. M. McCord, M.D. Expenses incurred as Councilor to No- vember 24, 1933	20.00	2122—	The C. A. Dahl Co. Wreath for Dr. G. Y. Moore, Presi- dent, 1930-31	10.80
2100—	Alliance Printing Co. Printing and mailing 1800 copies of the Nov. 1933 issue of the Journal	280.64	2123—	Alliance Printing Co. Printing and mailing 1925 copies of the Dec., 1933 issue of the Journal	285.35
2101—	J. N. Reisman Rent for November, December, 1933	28.50	2124—	Alliance Printing Co. 2,000 Membership cards; 2,000 pink slips in reference to dues for 1934	26.00
2102—	Southern Press Clipping Bureau News clippings for Oct., Nov., 1933	10.00	2125—	Dr. Geo. C. Brooke Refund on dues of Dr. W. H. Garri- son and Dr. T. J. Vansant	2.00
2103—	The Letter Shop Multigraphing letters to all officers of county societies in reference to fee schedule and the Federal Emergency Relief Administration; two sets of let- ters to delinquent and former mem- bers; letters to officers of the Associa- tion and Ex-Presidents in reference to articles on the Bicentennial of Geor- gia	10.90	2126—	E. K. Large, Postmaster Postage	30.00
2104—	Southern Bell Tel. & Tele. Co. Telephone account to Nov. 11, 1933	22.65	2127—	Alliance Printing Co. Advance on paper for printing the Journal. (Amount deducted \$50.00 per month on cost of printing)	150.00
2105—	Ivan Allen-Marshall Co. Journal to register names and addresses of members, index, cushion, carbon pa- per, Gem clips, typewriter ribbon and paper	12.25	2128—	Dr. H. M. McKemie Refund for over-payment of dues for members of Dougherty County Medi- cal Society	12.00
2106—	Service Engraving Co. Cut for illustration and work on elec- tros for advertisers	6.15	2129—	Alliance Printing Co. Printing and mailing 1800 copies of the January, 1933 issue of the Jour- nal less payment of \$50.00 on ad- vance; for stock	231.25
2107—	E. K. Large, Postmaster Postage for mailing Journal—deposit	25.00	2130—	Alliance Printing Co. Binding 11 volumes of the 1933 Journals and reprints of article, "Georgia's Fight for Cancer Control"; and Federal Emergency Relief Admin- istration and Civil Works Administra- tion	28.75
2108—	Miss Annie Jacks Commision on advertising and collec- tions	3.02	2131—	J. N. Reisman Rent for January, February, 1934	28.50
2109—	Allen H. Bunce, M.D. Salary as Secretary-Treasurer for November, 1933	150.00	2132—	Lester's, Inc. Wrapping paper and twine	1.30
2110—	H. L. Rowe Salary as Executive Secretary for November, 1933	175.00	2133—	Service Engraving Co. Cuts for illustrations and changes in electros for advertisers	17.06
2111—	E. K. Large, Postmaster Postage	30.00	2134—	Southern Bell Tel. & Tele. Co. Telephone account to Jan. 11, 1934	11.73
2112—	Addressograph Co. Ribbon for Addressograph and work on machine	2.50	2135—	Southern Press Clipping Bureau News clippings for Dec., Jan., 1933-4	10.00
2113—	Western Union Telegraph Co. Telegraph account to Dec. 1, 1933	2.27	2136—	The Letter Shop Letters and resolutions multigraphed for the Fulton County Medical So- ciety in reference to Steiner ward at Grady Hospital, \$5.80; instructions from U. S. Employees' Compensa- tion Commission to Civil Works Ad-	
2114—	Miss Annie Jacks Commission on advertising	11.02			

NO.	NAME	AMOUNT	NO.	NAME	AMOUNT
	ministrators for officers of county societies, \$4.00; letters to officers of county societies in reference to honorary, associate and intern members, \$2.80	12.60	2160—	Ivan Allen-Marshall Co. Blue line prints of mezzanine floor of Hotel Richmond, Augusta, to be used by commercial exhibitors during the annual session, May 8-11, 1934	14.20
2137—	Miss Annie Jacks Commission on advertising	8.77	2161—	S. H. Benedict Work on drawing of mezzanine floor of Hotel Richmond, Augusta, to have blue line prints made of floor space to be used by commercial exhibitors during annual session, May 8-11, 1934	3.00
2138—	Bryan, Middlebrooks & Carter, Attys. Retainer attorneys' fee for services from Jan. 1, to Dec. 31, 1934	1250.00	2162—	Empire Letter Shop Multigraphing letters to secretaries of county societies in reference to delegates and letters to prospective commercial exhibitors, Augusta session, May 8-11, 1934	3.50
2139—	Allen H. Bunce, M.D. Salary as Secretary-Treasurer for January, 1934	150.00	2163—	Southern Bell Tel. & Tele. Co. Telephone account to March 11, 1934	15.37
2140—	H. L. Rowe Salary as Executive Secretary for January, 1934	175.00	2164—	J. N. Riesman Rent for March and April, 1934	28.50
2141—	Western Union Telegraph Co. Telegraph account to Feb. 1, 1934	2.16	2165—	Lester's, Inc. Typewriter and drawing paper, rule and typewriter ribbon	4.25
2142—	Postal Telegraph-Cable Co. Wires to U. S. senators and congressmen by Committee on Public Policy and Legislation	34.02	2166—	Allen H. Bunce, M.D. Salary as Secretary-Treasurer for March, 1934	150.00
2143—	E. K. Large, Postmaster Postage	30.00	2167—	H. L. Rowe Salary as Executive Secretary for March, 1934	175.00
2144—	Massachusetts Bonding and Insurance Co. Premium on surety bond F-99019; R-1889-34, Allen H. Bunce, M.D., Secretary-Treasurer to April 1, 1935	7.50	2168—	Alliance Printing Co. Balance on printing and mailing the March, 1934 issue of the Journal	40.94
2145—	Southern Bell Tel. & Tele. Co. Telephone account to Feb. 11, 1934	6.75	2169—	Alliance Printing Co. Printing 1,000 Delegate's Credentials Cards	9.50
2146—	Service Engraving Co. Copper halftones for illustrations and repairs on electros for advertisers	40.62	2170—	Service Engraving Co. Copper halftones used as illustrations	7.03
2147—	J. W. Simmons, Clerk, Fulton Superior Court, Certified copies of charters of the Medical Association of Georgia and the Fulton County Medical Society	4.80	2171—	Southern Press Clipping Bureau News clippings for March, 1934 and special clippings in reference to Steiner Ward at Grady Hospital	7.00
2148—	Lester's, Inc. Bond typewriter paper	1.75	2172—	Western Union Telegraph Co. Telegraph account for March, 1934	4.47
2149—	Alliance Printing Co. Printing and mailing 1840 copies of the February, 1934 Journal; less \$50 deducted on account of advance to buy paper stock	226.15	2173—	E. K. Large, Postmaster Postage	30.00
2150—	Miss Annie Jacks Commision on advertising and collecting	1.90	2174—	E. K. Large, Postmaster Postage	30.00
2151—	Allen H. Bunce, M.D. Salary as Secretary-Treasurer for February, 1934	150.00	May 9, 1933—	Check, Dr. J. R. McMichael, Quitman, returned unpaid and paid later	7.00
2152—	H. L. Rowe Salary as Executive Secretary for February, 1934	175.00	Feb. 21, 1934—	Check, Dr. Z. V. Johnston, Calhoun, returned unpaid and paid later	36.00
2163—	Southern Press Clipping Bureau News clipping to March 1, 1934	9.00	Fulton National Bank—	Exchange charged on checks from May 1, 1933 to April 30, 1934	10.15
2164—	Western Union Telegraph Co. Telegraph account to March 1, 1934	1.73	United States Government—	2c tax on each check paid from April 1, 1933 to March 31, 1934	4.06
2155—	Alliance Printing Co. 2,000 copies Seventh Edition Radio Waves	9.25			
2156—	E. K. Large, Postmaster Postage	30.00		Total Disbursements	\$12,207.65
2157—	Alliance Printing Co. Printing and mailing 1875 copies of the March issue of the Journal; less \$50 deducted for advance to buy paper stock	236.56			
2158—	E. K. Large, Postmaster Postage	30.00			
2159—	E. K. Large, Postmaster Deposit for mailing the Journal	25.00			

*Secretary Bunce:* We have some amendments to the Constitution and By-Laws which were introduced last year. These appear on Page 151 of the April issue of our Journal. The first is a proposed amendment to Article IX of the Constitution, Section 3, to change the time for the election of officers. Next, a proposed amendment to the By-Laws, Chapter VI,



Section 2, to limit the scientific meetings for each annual session to two days, instead of the present three-day session. Next, a proposed amendemnt to the Constitution, Article IX, to add Section 4, as follows: The members of the State Board of Health shall be nominated by their respective district societies at the annual meeting of such societies preceding the annual session of this Association, and in failure of nomination by district societies, they be nominated by the delegates present from each of the district societies, all of which shall be ratified by this Association." And this addition to the By-Laws, Chapter 8, Section 9, Paragraph 2: A physician dropped from membership in a component society may not be admitted to membership in another component society without permission of the society from which he was dropped."

The sixth item is the fixing of annual dues for 1935. Our Constitution and By-Laws state the dues shall not exceed \$10. You fixed the dues for this year, that is 1934, at \$6. The Association will therefore fix the dues for the year 1935.

Item 7: I wish to thank President Richardson, the officers of the Association, the members of the various committees, for the good work which they have given us in carrying out our work which we have tried to do to the best of our ability. I thank you.

*President Richardson:* The Secretary's report will be referred to the Council. Next is the report of the Council, Dr. Redfearn.

Dr. J. A. Redfearn, Albany, Chairman of the Council, read his report.

#### REPORT OF CHAIRMAN OF COUNCIL

The Council has met twice since May with a full attendance each time. The diagnosis and treatment of cancer was discussed freely. The question of the Steiner Ward receiving pay patients outside of Fulton County was brought up and the plan discouraged after Councilors reported that this disease would be handled satisfactorily in the several districts, thus encouraging both doctors and patients, for many trained doctors throughout the state will find evidence of cancer early with better results and at reduced cost.

Dr. T. F. Abercrombie read a letter from the Georgia Pediatric Society which charged the Department of Public Health with dispensing vaccines and biologicals to people who were financially responsible. He states that no supplies are ever issued to anyone except on recommendation of a physician. Dr. Abercrombie told how the Department and County Commissioners of Health frequently referred patients to their physicians for treatment. He exhibited many forms of folders and circulars; in all people were advised to go to their doctors for preventive medicine. Parents are advised to take their children to their physicians for immunization. Too frequently they have been told to go by the County Commissioner of Health office. Motion carried commending Dr. Abercrombie and his staff for the plans outlined.

Dr. Cleveland Thompson, Millen, suggested a form

of post-graduate study for all members of the Medical Association of Georgia which shall issue certificates to members who qualify by writing an abstract or thesis of a subject taught. Motion carried to refer the suggestion to the Committee on Scientific work.

Dr. Allen H. Bunce exhibited a form for certificates which may be printed with stubs. The certificates to be given children who have received any form of preventive medicine. The form or certificate created a great deal of interest and expressions of approval.

At the October meeting Dr. Abercrombie explained the necessity of abandoning much of the work done by the Department due to decreasing funds. He hoped that some favorable changes would be made in January.

Dr. Bunce brought to our attention the necessity of adopting a fee schedule so that physicians of Georgia might receive payments from the Federal Emergency Relief funds. Motion carried to approve, assist and cooperate with the FERA. The fee schedule was accepted as requested except the fifteen cents per mile each way was not allowed. Why I don't know. The mileage cost may have seemed excessive when it is considered that the Federal Government usually allows only five cents per mile. Doctors charges are really based on time though we speak of mileage.

Dr. Bunce explained the terms "honorary members" and "associate members" and showed how a considerable saving could be made by the latter classification.

J. A. REDFEARN.

*President Richardson:* The next is reports of committees. The first we will ask for is the Scientific Program Committee, Dr. Houston, Chairman. Dr. Revell, do you want to report for the Committee?

Dr. S. T. R. Revell, Louisville, read the report of the Committee on Scientific work:

#### REPORT OF THE COMMITTEE ON SCIENTIFIC WORK

Your Committee held two meetings in Augusta, Georgia, and prepared the Scientific Program as it is printed.

A plan was followed in arranging the program to assign first an allotment of time to each subject and later to secure the men who should prepare the papers and lead the discussions on these subjects. That is to say, a certain number of periods were to be devoted to medical, to surgical, to each of the specialties, and to topics of general interest. Following this plan we were obliged to ask the men to write certain papers and to discuss certain topics and everyone asked has cheerfully responded in a most gratifying way. We feel that this is a good line of procedure to secure a balanced program.

WM. R. HOUSTON, *Chairman*

JOSEPH YAMPOLSKY

S. T. R. REVELL

ALLEN H. BUNCE

*President Richardson:* The next is the Committee on Public Policy and Legislation, Dr. Dan Y. Sage, Chairman.

Dr. Dan Y. Sage, Atlanta, read the report of the Committee on Public Policy and Legislation.

#### REPORT OF THE COMMITTEE ON PUBLIC POLICY AND LEGISLATION

The present year, being one in which the Legislature was not in session, has acted somewhat in the nature of a wet blanket on our ambitions for state legislation. However, some progress is being made in educating the public and our members in regard to the various changes that this Association has proposed or seeks to have enacted.

Most of you will remember our efforts to get legislative changes during the last session. Also that the only bill passed was the restoration of the Health Department and the organization of a representative Board of Health, composed of doctors, dentists, and laymen, and endorsed by the Medical and Dental Associations, and appointed by the Governor. All other bills, which we were actively supporting, failed of passage or were so mutilated by amendments that it was not wise to seek passage.

For the past few months, the lay public have been actively engaged in presenting our plea on Sterilization of the mentally deficient. It appears, in the present light, that they may prepare the minds of the legislators better than we have done. Many talks on the subject have been given before organizations all over the state, and the voters seem ready to demand that a suitable bill be passed.

The old question of Industrial Compensation which so completely penalized the workmen and swindled hospitals and medical attendants is again on our calendar. We usually have all kinds of promises before the legislature convenes. Then suddenly there is a change of sentiment and whatever fair and progressive bill is being considered develops such violent opposition that we have neither had nor been willing to use methods sufficiently powerful to secure passage.

The past year has seen a turmoil in national legislation and your Committee has been called upon to help resist many efforts to further hamper the medical profession. The President realized that we were right and fair in our objections to further hospitalization and services to the non-service connected disabilities. The Legion lobby caused our Congress to reverse its action.

The American Medical Association has kept us informed from time to time about legislative actions before Congress and we have tried to cooperate with our national body to the fullest extent.

Your Committee stands ready to do its best to pass whatever bills the Association indorses. We ask your fullest assistance as you must realize that this Committee cannot hope to succeed without the active help of the great majority of the members of this Association.

DAN Y. SAGE, *Chairman*  
GRADY N. COKER  
A. R. ROZAR  
ALLEN H. BUNCE, *Secretary-Treasurer*

T. F. ABERCROMBIE, *Director*,  
Dept. Public Health, State of Ga.

*President Richardson:* The next is the Committee on Arrangements, Dr. Traylor of Augusta, Chairman. Is any other member of the Committee here? If not, the next committee to report is the Committee on Medical Defense, Dr. Frank Boland of Atlanta.

Dr. Frank K. Boland, Atlanta, read the report of the Committee on Medical Defense:

#### REPORT OF COMMITTEE ON MEDICAL DEFENSE

The report submitted by Mr. Grover Middlebrooks, of the law firm of Bryan, Middlebrooks and Carter, includes twelve cases handled by this firm during the past twelve months. Of these cases three have been settled at a cost of \$250.00 for one case, \$80.00 for another and no cost in the third. The amounts asked in the remaining nine cases are as follows:

- |                         |                |
|-------------------------|----------------|
| 1. \$25,000.00          | 2. \$30,000.00 |
| 3. 50,000.00            | 4. 15,000.00   |
| 5. 10,000.00            | 6. 25,000.00   |
| 7. 10,000.00            | 8. 5,000.00    |
| 9. No amount mentioned. |                |

The nine cases aggregate \$170,000.00.

From the description of the cases furnished by Mr. Middlebrooks it does not appear that any of these cases will cause great financial loss.

In addition to handling the above cases Mr. Middlebrooks has given advice to several members of the Association concerning threatened claims.

A complete summary of the twelve cases mentioned is herewith included.

FRANK K. BOLAND, *Chairman*  
W. A. MULHERIN  
J. O. ELROD  
J. A. REDFEARN, *Chairman, Council*  
A. H. BUNCE, *Secretary-Treasurer*.

*President Richardson:* Dr. Traylor is here now and will give the report of the Committee on Arrangements.

Dr. George A. Traylor, Augusta, gave his report as General Chairman of the Committee on Arrangements.

*President Richardson:* The next committee is the Committee on Hospitals, Dr. R. H. Oppenheimer, Atlanta, Chairman. (Not present). Is any member of the Committee here to report? If not, the next is the Committee on Necrology, Dr. Mooney of Statesboro, Chairman. As he makes his official report at the memorial exercises on Thursday, I think we can pass that at the present time.

The next is the report of the Cancer Commission, Dr. Campbell of Atlanta.

Dr. J. L. Campbell, Atlanta, read his report of the Cancer Commission:

#### REPORT OF THE CANCER COMMISSION

There is submitted herewith the sixteenth annual report of the Cancer Commission of the Medical Association of Georgia. Your Cancer Commission was



created at Savannah in 1918 by the following resolution:

"On account of the increasing mortality from cancer throughout the world and because the general public is not aware of the danger of this great scourge; and because of the tendency to delay action in case of cancer until it is too late, therefore:

BE IT RESOLVED by the Medical Association of Georgia that the President be empowered to appoint a committee, consisting of one member from each congressional district to be known as the Commission of the Medical Association of Georgia for the Study and Control of Cancer,' and that this Commission shall have the power to select as many pathologists as it may see fit; and further to use any and all legitimate means to educate the public and call the attention of the profession to the increasing danger of cancer."

Dr. George R. White, one of the founders of the American Society for the Control of Cancer, moved the adoption of the resolution which had been prepared and submitted by one of the delegates of the Fulton County Medical Society.

It would be impossible, in the limited time at my disposal, to review the educational work done by your Cancer Commission in the past fifteen years. The Medical Association of Georgia was one of the first in the South to recognize the value of professional and popular education as a means of curbing the rapidly increasing death rate from cancer.

Your chairman and Dr. George R. White, a member of the Board of Directors and State Chairman for Georgia of the American Society for the Control of Cancer, had already spent a great deal of time collecting data and information necessary to the organization of a state cancer commission, so we were able to begin work almost at once.

At that time the activities of the American Society for the Control of Cancer were purely educational, outlining the early symptoms and signs of cancer and urging people to seek the aid of their medical adviser whenever any suspicious symptoms were noted. For the next four years Dr. White and your Cancer Commission cooperated in every way to bring to the attention of the profession and the public the salient facts necessary for early diagnosis. Some of the outstanding students of cancer control were invited to Georgia for public meetings to be held the evening before the annual session of the Medical Association. In 1920, Dr. Harvey R. Gaylord of Buffalo, New York held meetings in Atlanta and Macon. Governor Hugh Dorsey attended the meeting in Macon and added much to the interest of our work. There was very little interest shown in cancer at that particular time, but Governor Dorsey's attendance at Macon rather stimulated the interest and gave it a statewide background. About this time the State Journal published a special bulletin on cancer control as a supplement to the regular issue.

The Medical Association was not as well organized then as at present; but, as new county and district societies were formed, they were urged to make cancer

a prominent feature of their programs. About four years after the organization of the Cancer Commission Dr. White's health gave way and he was forced to withdraw from active participation in the work.

Your chairman was appointed state chairman for the American Society for the Control of Cancer and at once began to organize the state for the contemplated national "Cancer Week" campaign which the American Society was putting on. For this purpose the State Association appropriated \$100. We appointed a committee chairmen in nearly all the counties and a local chairman in many of the larger cities. We included as members of these committees the county school officials, county officers and, where there were Women's and civic clubs, a representative from each. There was hearty cooperation in most of the sections of the state during this campaign and the one that followed a year and a half later. The latter campaign lasted four weeks and required much more extensive preparation, for which the State Medical Association gave us \$150. Our work in these campaigns received splendid cooperation from the vast majority of the doctors and was heartily commended by the American Society for the Control of Cancer.

Neither your commission nor the national society in these days offered any advice or suggested the name of any individual or institution where treatment for cancer might be obtained. Between 1920 and 1929 we wrote and distributed for publication about fifty educational articles. These appeared in the public press, religious and other periodicals as coming from the Cancer Commission of the Medical Association of Georgia and the Georgia Committee of the American Society for the Control of Cancer.

In 1929, Dr. J. W. Cox came to Atlanta, called Dr. Allen H. Bunce, Dr. T. F. Abercrombie, and me to a conference and proposed a Tri-party organization as a part of a nationwide campaign which was being worked out by the national society. We all readily agreed to this as it seemed to be a step in the right direction. I resigned as State Chairman for the American Society for the Control of Cancer, so that three men instead of two might confer in these meetings. I recommended Dr. R. H. Fike as my successor for the state chairmanship. He was duly elected in June of that year and I received a letter from the home office of the national society to that effect.

For the next three years there was no communication from the state chairman of the American Society to either Dr. Abercrombie or me, and none from the home office of the society except in answer to some letters I wrote, telling what the state medical association's cancer commission was doing. About a year and a half ago I received a lengthy communication from Dr. Cox, outlining a five-year plan of campaign which the national society was putting on. I wrote him that we were already working along that line and assured him that we were doing everything they suggested, except that we could not raise money. He wanted us to raise a certain amount of money as a help to the entire work.

During the winter I learned that Dr. Cox would be in Atlanta, so I arranged a conference in Dr. Abercrombie's office. At this conference I objected strenuously to certain features in the literature which was being distributed by the national society. Dr. Cox promised to correct it. The conference broke up with everybody promising to cooperate. The objectionable features contained in the literature were not eliminated.

In March, 1934, I learned that the American Society for the Control of Cancer was applying to the American Medical Association for space for an exhibit at the Cleveland meeting. Owing to their lack of cooperation in the past and for other reasons I protested to Dr. West, Secretary of the American Medical Association, against the exhibit.

Since the last meeting of the Association your Cancer Commission has been greatly aided by the Woman's Auxiliary of the State Association. These ladies have paid for and distributed several thousand copies of a leaflet which we prepared for them, the title of which—"Mother Welfare"—was adopted as their slogan. This leaflet set out in as plain language as possible the early symptoms of cancer of the uterus and breast. The President of the Auxiliary has visited many meetings of the Parent-Teacher Association, woman's clubs, and social workers' organizations of various kinds and has always included the subject of cancer control in her talk. I want to endorse very strongly the sentiments that Dr. Richardson spoke of in his report in regard to the Woman's Auxiliary. They have certainly done splendid work in cooperation with the State Medical Association in their cancer control work. In fact, they have done much work, I think, and worthwhile work, in educating women of the middle class, and I feel that they should be highly commended for the work that they have done.

Shortly after the last meeting a regular five-year campaign plan which had been formulated by the Cancer Commission and approved by the Council of the State Association. That campaign plan had been formulated for some time, but it had not been officially acted upon until the meeting of the Council at that time. This included an article of about five hundred words on some phase of cancer for each issue of the Journal. I at once wrote to every district chairman of the commission for an article on a specific subject. Some of them have responded so well that up to the last issue of the Journal we have been able to publish them in an almost unbroken series.

In addition to this several districts—notably the First, Second, Fifth and Tenth—have reported public meetings, lectures to nurses, and special programs at county and district meetings and other organizations. The president of the Fifth District Association invited to the fall meeting a distinguished speaker who gave a well-prepared and well-illustrated paper on cancer of the stomach.

Our President in his visits to the district and county society meetings has taken occasion to stress the value of cancer control. He has also talked on the subject of cancer whenever he has had the opportunity

of addressing a meeting of any of the civic or woman's clubs.

Your chairman has prepared several graphic charts from data furnished by the State Bureau of Vital Statistics. He has delivered lectures to nurses in Atlanta.

I regret to report that there were more deaths from cancer in Georgia last year than ever before in its history. The deaths in Atlanta were exceptionally high, showing an increase of more than twenty-five per cent. One might think that this was due to imported cases, but the increase was fairly well distributed over the entire state.

I want to repeat that in 1931 your chairman wrote several hospitals in the state asking that cancer clinics be organized in the larger general hospitals to conform with the minimum standard as outlined by the Committee on the Study of Malignant Diseases of American College of Surgeons, and that conferences be held at some of the district meetings where the doctors in the surrounding territory should be invited to present their interesting cases. I shall endeavor to furnish history blanks from the American College of Surgeons, should any one wish to have them.

In conclusion, your chairman wishes to recommend that this Association take steps to endorse a bill authorizing the state to build and equip a hospital for the treatment of indigent cancer patients. I might say that I wrote to all of the doctors on the State Board of Health. I have had answers from all of them except one, and his secretary wrote that he was out of the city. All of these gentlemen endorsed the plan, and we hope that the Committee on Public Policy and Legislation may get together and draw up a bill to present to the next legislature authorizing a cancer hospital for strictly charity cases. It could be controlled much the same as the tuberculosis hospital at Alto and would be a great boon to many people now suffering with cancer.

Your chairman wishes to recommend also that the Cancer Commission redouble its efforts among the doctors of the state, that we encourage the organization of cancer clinics at strategic points, that we encourage the Woman's Auxiliary in their work and commend them for the step they took at the meeting of the State Federation of Woman's Clubs in Atlanta a short while ago when, through their efforts, the Federation endorsed the work of the Cancer Commission of the State Medical Association.

J. L. CAMPBELL, *Chairman*.

*Dr. Campbell:* I have asked the members of the Cancer Commission to meet me at five o'clock today, and I particularly want to discuss this matter of establishing a cancer hospital in the state of Georgia at some central point.

*Dr. Charles C. Harrold (Macon):* As a member of the Cancer Commission, from the Sixth District, I suggest that that report be held up until after the meeting of the Committee. I think there are some questions that should be included in that report. I make that in the form of a motion, that the report



be held up, not to have it completed until after the meeting of the Commission.

The motion was regularly seconded.

*President Richardson:* Is there any discussion? If not, all those in favor of postponing the adoption of this report until after the meeting of the Cancer Commission please say "aye"; opposed "no." The motion is carried, and it is so ordered.

I should like to state, Dr. Campbell, for information, that as I sit here I see only three members of the Cancer Commission present.

The next Committee to report is the Committee on the Medical History of Georgia, Dr. Boland, Chairman.

*Dr. Frank K. Boland (Atlanta):* This is a subcommittee report. The large committee consisted of the ex-presidents, and others, and from the large committee a subcommittee, consisting of Dr. Dancy, Dr. Fort, Dr. Bunce and I, was appointed to work on this history.

Dr. Boland read his report:

#### MEDICAL HISTORY OF GEORGIA

##### *Sub-Committee Report*

The subcommittee on Medical History of Georgia begs leave to submit the following report for the fiscal year 1933-34:

The report of the subcommittee on Medical History of Georgia for 1933-34 is largely a repetition of the report for 1933, in that the committee is doing what it can to complete this work, but is not getting the cooperation needed from those who are in a position to assist.

All the secretaries of county societies have been requested to send in contributions, but very few have responded.

In addition, since the last report, we have appealed to the ordinaries of all Georgia counties requesting data on medical history of their counties. Of the 159 counties thus addressed 46 have reported, but only 9 have sent in any data.

The great fear of the committee, as mentioned last year, is that when the work is finally published criticism will come from various places that the book should have said something about this or that event, or this or that Georgia doctor. After the appeals which we have made to county secretaries and county ordinaries, and in the annual reports of the committee, we feel that everyone has been given an ample opportunity to make such contributions as they think should be included in such a work.

The committee already has in hand practically all the biography which should be included, although of course it will be impossible to include biographical sketches of all members of the Association. It would not be a difficult task to prepare a book simply of biographical sketches of Georgia doctors. Of course the book will contain many biographical sketches, but in addition we are trying to prepare a general connected historical sketch of the broad subject of medicine in our state.

This is slow work, but probably could have been completed if it was possible for the members of the committee to devote more time to the work. We believe when another report is published that the work will be finished. In the meantime, we make another appeal to members of the association to give us all the information they can concerning the Medical History of Georgia.

FRANK K. BOLAND, *Chairman*

W. R. DANCY

A. G. FORT

A. H. BUNCE

*Subcommittee on Medical History of Georgia.*

*Dr. Boland:* We should like to have some interesting narratives to put into this history. Just to publish a book of dates and figures would be very dry reading, and if we could get some stories into the book, like the one that Dr. Calhoun included in his history of the early days of the Atlanta Medical College, it would make good reading. In this history he told about the time when Sherman was proving to Atlanta that war was hell, when he sent out an order to burn down the buildings on a certain day. The old Atlanta Medical College, with a cupola on the top, was then in existence, and the building was then being used as a Confederate hospital. Old Dr. Dalveny, who had been a soldier in the French army and knew a good deal about war, was in charge of this building, and when he heard that the soldiers were coming down to blow up the building one night, since he realized the place had been emptied of patients, he got a lot of soldiers to go into the hospital and lie on cots, and he got them all drunk. He gave them lots of corn liquor, and they were beastly drunk when the soldiers came down to blow up the hospital.

Dr. Dalveny said, "Gentlemen, you certainly would not blow up a hospital full of sick men like this," and these soldiers of Sherman came in and saw these wards full of men whom they thought were very sick, and they said they would put off blowing it up until the next morning. So he got the soldiers to depart. By the next morning Sherman had left Atlanta, and the hospital was saved.

If we could get some stories like that, it would put some life and pep into the Medical History of Georgia.

*President Richardson:* The next Committee to report is the Committee on the Abner Wellborn Calhoun Lectureship.

Secretary Bunce read the report of the Committee on the Abner Wellborn Calhoun Lectureship:

#### ABNER WELLBORN CALHOUN LECTURESHIP COMMITTEE REPORT

As Chairman of the Abner Wellborn Calhoun Lectureship Committee I wish to announce that the lecturer for this meeting of the Association is Dr. Emil Novak of Baltimore, Maryland.

The Treasurer of the Calhoun Lectureship Fund is Dr. Frank Boland, whose report is herewith attached:

## Report of year April, 1933 to April, 1934

Cash on hand April, 1933.....	\$513.76	\$ 513.76
Expenses Dr. M. C. Sosman, May 1933, including 2c check tax..	148.82	148.82
		<hr/>
		\$364.94
Refund from Medical Association of Georgia on expenses of Dr. Sosman.....	50.00	
July 1, 1933—Interest from bank.....	5.44	
July 1, 1933—Dividend Southwestern Ry. Stock .....	32.50	
July 1, 1933—Dividend Ga. P. Co. stock..	13.50	
Oct. 1, 1933—Dividend Ga. P. Co. less tax	12.82	
Jan. 1, 1934—Dividend Ga. P. Co. less tax	12.82	
Jan. 2, 1934—Interest from bank.....	7.09	
Jan. 3, 1934—Dividend Southwestern Ry. stock .....	32.50	
April 2, 1934—Dividend Ga. P. Co. stock	13.50	
		<hr/>
Total in bank .....		\$ 545.11
Ten shares stock in Southwestern Railroad..	\$1332.50	
Nine shares Georgia Power Co. stock.....	495.00	
		<hr/>
Fund Total .....		\$2372.61

JAS. E. PAULLIN, *Chairman*  
H. I. REYNOLDS  
E. E. MURPHEY  
CRAIG BARROW  
F. K. BOLAND, *Treasurer*

*President Richardson:* The next is the Committee on the Crawford W. Long Memorial Prize.

Secretary Bunce read the report of the Committee on the Crawford W. Long Memorial Prize:

CRAWFORD W. LONG MEMORIAL PRIZE COMMITTEE  
REPORT

Fourteen essays were offered in competition for the Crawford W. Long Memorial Prize. These were exceptionally well prepared and conveyed a splendid comprehensive knowledge of the subjects handled. The authors are to be heartily congratulated upon the general excellence of their essays. After a thorough study of these essays, it was the opinion of the majority of the committee, that although the essays as a whole were very superior, they did not contain the evidences of sufficient original work and investigation to prove worthy of the prize, hence, for this reason the committee has decided to present no prize this year.

It should be noted and the fact thoroughly understood that the prize is presented for original investigation in the field of medicine.

WM. R. DANCY, *Chairman*

*President Richardson:* The next Committee is the Advisory Committee to the Woman's Auxiliary, Dr. Minchew.

Dr. B. H. Minchew read the report of the Advisory Committee to the Woman's Auxiliary:

ADVISORY COMMITTEE TO WOMAN'S AUXILIARY  
REPORT

The Advisory Committee met with the officers of the Auxiliary at Radium Springs in July, during the meeting of the Chattahoochee Valley Medical Society. Doctors Richardson, Brawner, Greer and the Chairman were present. Problems of the Auxiliary were discussed and the general program for the year outlined. It was apparent that the Auxiliary had been working so smoothly since its organization, that some of the difficulties of finding itself had been overcome.

The Auxiliary has been very fortunate in having excellent leadership since its first meeting and work of the Advisory Committee has been very easy. A great many letters have been exchanged between the President of the Auxiliary and the Chairman of the Advisory Committee concerning their work, but it has been largely a matter of confirming the wisdom of her splendid decisions, rather than giving advice.

The Chairman wishes to state that the fine cooperation of Doctor J. N. Brawner of Atlanta, as a member of the Committee, in being available to the President of the Auxiliary, has made the work of the Committee altogether easy. His wisdom and willingness to serve has been apparent on every occasion when advice or work was needed, and it is a pleasure to pay this tribute to him in his work for the Committee.

B. H. MINCHEW, *Chairman*  
JAS. N. BRAWNER  
RALSTON LATTIMORE  
JAS. L. KING  
CHAS. L. GREER

*President Richardson:* The Chairman of the L. G. Hardman Loving Cup Committee, Dr. Selman, has asked that his report be deferred at this time.

The next Committee is the Committee on the Study of Maternal Mortality and Infant Deaths. It was originally appointed at Savannah, on motion of Dr. S. S. Smith of Athens. The Association authorized the appointment of such a committee, and the President appointed a committee. However, it was not designated whether the committee should elect or appoint its chairman. When the matter came up last year, I appointed the committee and did not appoint a chairman, thinking the committee would appoint its own chairman. It seems to have not done so. Dr. Smith, do you know of a report this committee wants to make?

Dr. S. S. Smith (Athens): We did not have a chairman this year. We are interested in this thing, and a few of us are here, and we can get together.

*President Richardson:* I was going to suggest this, Dr. Smith, if you will allow me: that between now and the next meeting of the House of Delegates you call a meeting of this committee and make such recommendations to the House of Delegates as you see fit. The next meeting will be Friday morning, unless the House sees fit to call an earlier meeting. If you will act as chairman of that committee and call a meeting of that committee, we will be glad to hear from the committee at our next meeting.



*Dr. S. S. Smith:* We will let you know in a few minutes.

*President Richardson:* We will pass that for the present.

Are there any special committees to report?

*Committee on Economics and Public Relations*

*Secretary Bunce:* Mr. President, Members of the House of Delegates: We have another special committee about which there seems to have been some misunderstanding, a Committee on Economics and Public Relations, composed of Dr. R. M. Harbin, Rome, Chairman, 1934; Dr. William A. Mulherin, Augusta, 1935; Dr. C. L. Ridley, Macon, 1936; Dr. Dan Y. Sage, Atlanta, 1937; Dr. C. W. Roberts, Atlanta, 1938, and Mrs. J. Bonar White, President, Woman's Auxiliary, Ex-Officio. That is the way that committee is listed in our official transactions. It is the only information we have about it.

Recently we received a letter from Dr. Harbin saying he had been sick a good deal during the year and was unable to do any work, that is, to call the committee together at all. Whether or not it was the intention of the President to appoint Dr. Harbin chairman or some other man chairman, I do not know, or whether it was the intention that the committee should elect a chairman. We placed the names as they were given to us in the official transactions.

*President Richardson:* I did appoint Dr. Harbin as chairman of that committee. However, Dr. Harbin wrote me a letter recently and said that he had written me earlier in the year and said he could not serve. I do not doubt that he did, but I did not get his letter. That is the reason the committee has no report at this time. I presume there is nothing else to do about it.

Are there any other special committees? If not, we are ready for the report of delegates to the American Medical Association.

*Dr. C. W. Roberts (Atlanta):* Mr. President: Dr. William H. Myers, of Savannah, being the senior member in the House of Delegates of the American Medical Association from this Association, would have made this report, but unfortunately we have information from him to the effect that he could not be here this afternoon. Therefore, the report is being presented by me at this time.

Dr. Roberts read the report of the delegates to the American Medical Association:

#### REPORT OF DELEGATES TO THE A.M.A.

The American Medical Association met in Milwaukee, Wisconsin, June 12-16, 1933. The House of Delegates, as is customary, had its first meeting at 10:00 a.m. on June 12th. After the roll call President Edward H. Cary of Dallas, Texas, made an address in which he reviewed the activities of the Association during the time of his presidency. He was followed by President-Elect Dean Lewis of Baltimore. His address dealt with the condition of the medical profession of the United States, especially the economic outlook. Dr. Lewis was followed by a short address

from Vice-President Randolph Matas of New Orleans. The Secretary then read his minutes, which were very lengthy and comprehensive, in which he reviewed membership, fellowship, changes in the constitution, and field work of the Association.

The Board of Trustees, through their Chairman, Dr. J. H. J. Upham of Columbus, Ohio, made a detailed report of the activities of the Board of Trustees for the year 1932. He stated that the total income from dues and subscriptions was \$61,060.53 less than for 1931, and the advertising income was \$122,244.56 less than for 1931, due to unusual expenditures in combating quacks like Baker of Muscatine, Iowa, J. R. Brinkley of Kansas, P. L. Clark of Chicago and the Ora-Noid Company. All salaries were reduced and every economy instituted so that a net gain of \$93,842.75 was made. This was very largely due to an income of \$74,967.03 interest on investments. A total investment in bonds of the Association of \$1,895,831.38 was reported. So carefully had the trustees invested the money that there was not a single bond made worthless by insolvency, and only two or three which did not pay interest on the investment. This record is equalled by very few organizations in the United States and speaks very highly for the way the trustees look after the business of the Association. The subscriptions to the Journal of the American Medical Association showed a remarkably small decrease, which indicates the high value placed upon this publication. The Health Magazine "Hygeia," for the first time more than paid for itself as the Association has heretofore lost money on it. The report indicates that the library has greatly increased in usefulness as the librarian received 500 letters during the year requesting information.

The Bureau of Medical Economics, which is under the Board of Trustees, went into all of the phases of medical economics, which are being discussed so extensively the last two or three years. They stressed the growing contract practice, group hospitalization, workmen's compensation, methods of collection agencies, and the need for a course in medical economics in medical schools, group practice, health and accident insurance, and all matters pertaining to the economic factors of these troublesome times.

The work of the Bureau of Investigation showed that the Bureau is very active in following up all activities of quackery and patent medicines. They have answered a great many inquiries and sent out numerous educational pamphlets, posters, and lantern slides, which are made available to the state and county societies.

The Committee on Foods had completed its third years and showed its influence over advertisers of food products. A great many foods were put on the market with exaggerated claims, which upon investigation proved not to be true. It has now become a very desirable thing for the leading advertisers of such products to get the badge of acceptance from this committee. It is felt that this is one of the most valuable activities of the Association.

Dr. Samuel J. Kopetzky, delegate from New York, introduced a resolution providing for the standardization of specialists in order that any one regardless of qualifications could not set himself up as a specialist in any particular line. It is hoped to bring about uniform requirements for specialists in the different lines of professional activities. This resolution was passed.

Your delegates introduced the following resolution, which was passed:

"WHEREAS, The annual sessions of a number of the constituent associations occur so near the time of the annual sessions of the American Medical Association that it is now impossible for them to send in a complete list of the names of their delegates in time for these to appear in the Handbook; be it

RESOLVED, That the House of Delegates of the American Medical Association respectfully suggests that all constituent associations elect their delegates far enough in advance so that the names of all delegates may be properly listed in the Handbook.

The suggestion is made that the terms of delegates might run from January 1 to December 31 of the years for which they are elected. Be it

RESOLVED, That a copy of this resolution be sent to the secretaries of all constituent associations."

A resolution was passed endorsing the Minority Report of the Committee on the Costs of Medical Care.

A resolution on the creation of a committee for the study of Birth Control was introduced and after considerable discussion was defeated by a vote of 46 to 66.

The Council on Medical Education and Hospitalization made a report, extract from which is as follows:

"Last year, the Council called attention to the fact that over a ten-year period the number of medical graduates greatly exceeded the number of deaths in the medical profession. In the final report of the Commission on Medical Education it is shown that the ratio of physicians to population is twice as great in the United States as in England, France and Germany. Dr. Willard C. Rappleye, director of study of the commission, estimates that there is already a surplus of 25,000 physicians in this country, and he goes on to show by actual calculations that, with the present rate of production, the number of doctors will increase more rapidly than the general population. In spite of these conditions, there were last summer 12,280 young men and women who applied for admission to our medical schools, of whom 6,335 were accepted and actually matriculated. In the light of these facts it would seem desirable for the American Medical Association assiduously to inform the public that the profession is already overcrowded, to enlist the co-operation of colleges and high school facilities in placing before their pupils such information as will enable them intelligently to select a career, and to invite the active support of the Association of American Medical Colleges in bringing about a substantial reduction of their enrollment."

An amendment to the Constitution was proposed by Dr. Southgate Leigh, delegate from the Medical

Society of Virginia, providing that presidents of constituent state medical associations be ex-officio members of the House of Delegates. The Reference Committee on Amendments to Constitution and By-Laws did not recommend the adoption of this resolution and it was lost on a vote.

The Georgia delegates were present at all of the meetings of the House of Delegates and voted on every resolution.

Dr. Walter L. Bierring, Des Moines, Ia., was elected President-Elect; Dr. Joseph F. Smith, Wisconsin, Vice-President; Dr. Olin West, re-elected Secretary; Dr. Herman L. Kretchmer of Chicago, was elected Treasurer, and Dr. F. C. Warnshius was re-elected to serve as Speaker of the House. It was voted to meet in Cleveland, Ohio for the annual meeting of 1934.

WM. H. MYERS

O. H. WEAVER

C. W. ROBERTS

*President Richardson:* The next are the reports from fraternal delegates to other state associations. I think there is only one of those delegates present this afternoon. I happen to know that Dr. Roberts and Dr. Walker attended the meeting of the North Carolina Association.

*Dr. C. W. Roberts (Atlanta):* Mr. President and Members of the House: Just a report in ten to fifteen words.

Dr. Walker of Macon and I, appointed by the President to go as fraternal delegates to North Carolina, accepted our task seriously, and went to the meeting at Pinehurst on April 30, May 1-2. Pinehurst is in about the center of the state of North Carolina, easily accessible by good roads from every section of the state. At the meeting there were 728 registrations, being second to the largest number who ever registered at an annual session of the Medical Society of the State of North Carolina. This large registration was interpreted by the profession of North Carolina as indicating improved conditions in the practice of medicine in North Carolina.

The program was exceedingly interesting. Your delegates received the greatest courtesy, and we were requested to bring the fellowship and good wishes of the members of the Association of North Carolina to the brethren in Georgia.

Thank you.

*Dr. Frank K. Boland (Atlanta):* I should like to say I attended this meeting at North Carolina with Dr. Roberts and Dr. Walker, and want to say something Dr. Roberts did not say, and that is that he made a wonderful speech and a fine impression.

#### *Fraternal Delegates*

*President Richardson:* I should think it might be advisable for the Reference Committee, in taking over the recommendations that have been made here this afternoon, to take under advisement also the question of our continuing to send fraternal delegates to other state associations. I think it is a nice gesture, but there is no provision made for the expenses of these men, and it is somewhat of a hardship. A good many



of the men cannot go. I think we might think about the question of whether we want to continue that procedure.

The next heading is unfinished business.

#### *Constitution and By-Laws*

*Dr. J. A. Redfearn* (Albany): Mr. President, I have some proposed amendments to the Constitution and By-Laws. In making these proposals, I want to say just a few words in explaining why I am making them.

Originally officers were elected by this Association at three p.m., on the third day of the session. There were not enough present then for election, so we moved it back to the noon hour. Now it comes on the third day at twelve noon. Owing to the rapid transit of the present day, it is possible for a man to attend two full-day sessions and be away from home only one night. Provision is made in our Constitution already for sectional meetings, thus making it possible to read as many papers or more by holding such sessions one-half day if desired. Your attendance on the morning of the third day, except during the election hour, has been very, very poor for years.

Some argue that the present set-up offers a vacation. If they want a vacation, let them stay an extra day and enjoy it all the more, without having to play hookey.

I offer an amendment to the Constitution, Article IX, Section 3, to change the time for the election of officers. Also to the By-Laws, Chapter VI, Section 2, to limit the scientific meetings for each annual session to two days, instead of the present three-day session.

I move the adoption of these changes, Mr. President.

*President Richardson*: You have heard the motion. Does it receive a second?

The motion was regularly seconded.

*President Richardson*: You have heard the motion to amend the By-Laws of the Association to limit the annual session to two days for the scientific program. Is that the motion?

*Dr. Redfearn*: Yes, and change the time of election of officers. The officers are now elected on the third day, and if there were a two-day session the time would have to be changed.

*President Richardson*: Does your motion state when the election should be held? Your By-Laws now state it should be at twelve o'clock on the last day.

*Parliamentarian Simmons*: I think the proposed amendments are not in order. That is they are not in the proper shape for consideration. If you are going to amend the Constitution and By-Laws, you should state the section as it now reads, and in what way you wish to amend that section, and give us a completed By-Law or article or section of the Constitution as you wish it introduced in the place of the one that is there now, so that we will distinctly understand what we are voting on. That is, rewriting a section, or interpreting a section, or placing the words in. So if *Dr. Redfearn* will clarify his motion before the House of Delegates votes on it, so they will know

what they are voting on—in other words, you will have to state a specific time, the second day of the proposed session, and so forth, amending each one of these. In amending a Constitution or a set of By-Laws, it is necessary to state specifically that section, that paragraph, that chapter, as it now is, and state the substitution of such words or the entire phrase or an entire section or an entire chapter, and the proposed amendment that you wish to introduce. You cannot just say that you move that we have a two-day scientific session. You have to write it in, and give us the section as it will read when amended.

I think with that before the House we can proceed to vote a great deal more intelligently.

*President Richardson*: The Chair wishes to say that any amendment to the Constitution and By-Laws must be submitted to one session and be allowed to lay over to the next session, and a written notice must be given at least ten days in advance of the next meeting in order for it to be acted upon. The first proposed amendment as set out in the April Journal is to Constitution Article IX, Section 3, to change the time for the election of officers. The next is an amendment to the By-Laws, Chapter VI, Section 2, to limit the scientific meetings for each annual session to two days, instead of the present three-day session. The next is Article IX of the Constitution, to add Section 4, as follows: "The members of the State Board of Health shall be nominated by their respective district societies at the annual meeting of such societies preceding the annual session of this Association, and in failure of nomination by district societies, they be nominated by the delegates present from each of the district societies, all of which shall be ratified by this Association."

I will read you Article IX of the Constitution and By-Laws, which relates to the election of officers: "The officers of this Association shall be elected by ballot at 12 o'clock noon on the third day of the annual session. Nomination for office shall be made orally," etc.

It would seem to me that any amendment changing the time of the election of officers would have to be specific, it would have to state the exact time at which you propose to elect officers. For that reason, the Chair must rule that the amendment is out of order.

*Dr. Redfearn*: How about the two-day session? It seems to me that is specific. I did not want to set the hour for the election of officers, because I felt that this body should do that. The two-day session is the main thing, and I should like to inquire whether that is not in order.

*President Richardson*: The question arises whether the body can act on one part of the amendment without acting on the other part of the amendment.

*Dr. Redfearn*: One is an amendment to the By-Laws and the other to the Constitution. It is written out here separately.

*Dr. R. L. Miller* (Waynesboro): A point of order. If you limit it to a two-day session and you cannot change this section of the Constitution as to the elec-

tion of a President-Elect, when are you going to have an election? It now calls for the election of officers at noon on Friday.

*President Richardson:* I think the point is well taken, and I have no disposition to interfere with the wishes of the House, but it would seem to me that under Parliamentary usage that part is out of order.

*Parliamentarian Simmons:* I do not see that we have any discretion in the matter. It does not say whether it shall be two or three or four days. I think your By-Laws, so far as I can read them, in that particular section which you care to amend, do not state any period at which a session shall be held. If he wishes to amend Section 2 of Chapter VI of the By-Laws, it can be amended by laying over for a day, as far as that is concerned. Your Constitution requires notice a year in advance and a two-thirds vote.

*Dr. Redfearn:* To clarify this, I think possibly if you will just take the sections and write in the changes, saying, "substitute," or "interpolate," it will be acceptable for action by the House of Delegates. After you have amended your section to provide for a two-day session, you can state that the officers shall be elected at twelve o'clock noon on the second day of the annual session, and whether that is on Tuesday, Wednesday or Thursday, it does not make any difference. It will be on the second day. You can so state in your Constitution amendment. As to whether it shall be one or two days, I find that section gives the Committee on Scientific Work, or the Program Committee, so-called, charge of the character and scope. They can have it run for three days if they want to. There is nothing to prevent them from doing so. Or it can be four days, or two days, or one day. In fact, they have the discretionary power as to how long we shall stay here and listen to the scientific program, according to that particular Section 2 of Chapter VI, under the head of "Committees."

*Dr. Redfearn:* I should like to have it take that course, but I want to say with reference to what was just said, that I am not trying to change this, where it says, "The annual sessions shall take place on the second Wednesday in May at such place as shall be designated by the Association," but it fixes it that the first day shall be on Wednesday. I should like to submit it in writing at the next meeting of the House of Delegates. I did not want to set the time of the election of officers, but I will be glad to incorporate that and submit it at the next meeting of the House.

*Dr. O. H. Weaver (Macon):* I should like to ask a question regarding the ruling made by Dr. Simmons, if I understand him right, as to whether this Committee on the Scientific Program has complete authority as to how many days we shall meet in this body. If they saw fit to have a one-day session, since the Constitution provides for the election of officers on the third day there would be a contradiction that seems unfortunate. There is something seriously wrong there with the Constitution and By-Laws.

*Parliamentarian Simmons:* I was just quoting the section of the By-Laws which Dr. Redfearn wanted to amend.

Section 2 of Chapter VI reads: "The Committee on Scientific Work shall consist of four members of which the Secretary-Treasurer shall be one. The other three members shall be appointed for terms of one, two, and three years, respectively. The vacancy which will occur each year by the expiration of the term of one member shall be filled by the President with an appointment for three years. The member who has the shortest time to serve shall be Chairman. The committee shall determine the character and scope of the scientific proceedings of the Association for each session. Thirty days previous to each annual session it shall prepare and issue a program announcing the order in which papers, discussions and other business will be presented.

"This By-Law shall not prohibit the Committee on Scientific Work from inviting not more than two distinguished members of the national organization to deliver addresses or read papers at any annual meeting."

*Dr. Weaver:* According to Dr. Simmons' statement, that is very clear, but I do not think the word "scope" covers the duration of the number of days they shall be in session. I think the word "scope" should be defined as to the arrangement of the program and not the length of it.

*Parliamentarian Simmons:* The matter of the time of the session did not enter into the section he was seeking to amend. If he is going to amend, he will have to amend the Constitution. He will have to bring it in in a complete section or a complete chapter, or such amendments as apply to that particular case, so it will be in the form to enter into the Constitution and remain in such form as it is acted upon by the body, and not merely in the form of a resolution. You have to substitute language for language, section for section, and line for line.

*President Richardson:* The thing I should like to get clear in my own mind is that the Constitution states that the officers shall be elected at twelve o'clock on Friday of the annual session, and any amendment to the Constitution must be made a year in advance and must lie over for a year and must be acted upon at the subsequent meeting. An amendment has been offered to the Constitution, but that amendment was not specific. It simply states that we change the time of the election of officers, but it does not state when they shall be elected. It is a question in my mind as to whether you can amend the Constitution by simply writing in something now, to be acted on tomorrow, which was not done a year ago. My own feeling about it is that you cannot do it. I do not see how the body can act tomorrow on something that should have been specific. The House can resolve itself into a committee of the whole, and discuss the matter.

*Dr. J. J. Clark (Atlanta):* A motion was made and seconded to adopt it, and you ruled it out of order, and the Parliamentarian overruled it.

*President Richardson:* With all due respect for the Parliamentarian, I have the greatest respect for him, and he is acting in an advisory capacity. I did rule the motion out of order, and if you see fit to appeal



from the ruling of the Chair I will be very glad to entertain that motion. I think the motion is out of order, and I so rule.

*Dr. Marvin M. Head (Zebulon)*: I move that we appeal the opinion of the Chair.

The motion was regularly seconded.

*President Richardson*: I will put it in the affirmative, to make it simpler. The motion is that the ruling of the Chair shall be sustained. Is there discussion?

*Dr. H. M. Tolleson (Hahira)*: Discussing this matter, it is so worded that if an amendment is proposed it must be presented at one meeting and carried over to the next meeting. If Dr. Redfearn wishes to propose an amendment which he has not already proposed, he must propose it at this meeting, to be taken up at the next meeting.

*President Richardson*: Dr. Tolleson, I think your discussion is out of order, because the motion before the House is an appeal from the ruling of the Chair. That motion is not debatable.

The question was called for.

*President Richardson*: The Chair has ruled that Dr. Redfearn's motion, to change the scientific session to two days and amend the By-Laws to change the time of election of officers, is out of order. The motion before the House is, shall the ruling of the Chair be sustained? That motion is duly seconded. Those in favor of sustaining the ruling of the Chair please vote "aye"; opposed "no." The motion carries, and the ruling of the Chair is sustained.

*Parliamentarian Simmons*: I ask if the ruling of the Chair includes the fact that you cannot introduce the amendment to the Constitution at this session. I think you stated that. May I ask the Secretary if notice of such proposed change in any form was given at the prior session? That is, if the gist of it was given, a notice that such a change would be sought at this meeting. I certainly think we are straining out gnats and swallowing camels if we fail to act simply because we haven't it in the exact language that Parliamentary usage would require. Just so that we have the substance of it. You must distinguish between the By-Laws and the Constitution, because you can amend the By-Laws with one day's notice, but requires a year's notice on the Constitution, and a majority vote is required on the By-Laws, but a two-thirds vote on the Constitution. If a motion was made last year concerning such-and-such a section, seeking to change the days in your annual session, if that notice was given, the exact verbiage of it would have to be stated in order for it to be acted upon at this session.

*President Richardson*: We will go back and have the report from the Committee for the Study of Maternal Mortality and Infant Deaths.

*Dr. S. S. Smith (Athens)*: Your Committee recommends that the Committee for the Study of Maternal Mortality and Infant Death be continued, and that the President of the Medical Association designate a Chairman for the Committee and that they be instructed to proceed with this study.

I make that in the form of a motion.

The motion was regularly seconded by several.

*President Richardson*: Is there any discussion? If not, those in favor say "aye"; opposed "no." The motion is carried, and it is so ordered. Is there any other unfinished business?

#### BY-LAW AMENDED

##### *By-Laws: Members State Board of Health*

*Secretary Bunce*: We have another amendment. This is an amendment to the Constitution and By-Laws, Article IX, to add Section 4, as follows: "The members of the State Board of Health shall be nominated by their respective district societies at the annual meeting of such societies preceding the annual session of this Association, and in failure of nomination by district societies, they be nominated by the delegates present from each of the district societies, all of which shall be ratified by this Association."

*Dr. R. L. Miller (Waynesboro)*: I move the adoption of that addition.

The motion was regularly seconded.

*President Richardson*: Is there any discussion? If not, those in favor of the motion say "aye"; those opposed "no." The motion is carried.

Is there any other unfinished business? Is there any new business?

##### *Committee on Public Policy and Legislation*

*Dr. H. M. Tolleson (Hahira)*: I wish to bring a matter briefly before this body, to be referred to the Committee on Public Policy and Legislation. I wish to renew the interest of the Medical Association of Georgia in the question of a basis science law. It is very interesting that this law has functioned for the year of 1933 in seven states. Seven states of the United States have the Basic Science Board, which has functioned in the past year. In some of these states the basic sciences are interpreted as anatomy, physiology and chemistry. Some add pathology and some add bacteriology.

Some 700 or 800 applicants have been examined by these boards in these seven states. Of that number, approximately 11½ per cent of doctors and medical students failed to pass, approximately 30.8 per cent of the osteopaths failed to pass, 83 and a fraction per cent of the chiropractors failed to pass.

I wish to state specifically that I aim no intimation at the chiropractors' profession. It strikes me that a man who sets out to practice the healing art should certainly know how this body is made and how it functions normally before he can possibly interpret disease in the body.

Soon we will begin to have elections in our various counties for legislators. It is my purpose to stimulate your interest to the extent that you will go back and make positive efforts to convince your candidates and those who are out to be elected to the legislature of the importance of this bill.

I propose that the Committee on Public Policy and Legislation draw up a new basic science law to be presented by someone selected, at the next meeting of the legislature.

I have personally talked to several candidates, and I find they are very ignorant of the question. They

all agreed immediately and wholeheartedly, as candidates will do, that it is a great thing. If we will hold them to that promise, if we will hold their feet to the fire to get them to vote for it, we will get some action on it.

I wish to make that proposal.

*President Richardson:* Are you willing for that to be referred to the Reference Committee?

*Dr. Tolleson:* To the Committee on Public Policy.

*President Richardson:* Yes. If the Committee on Public Policy and Legislation will take Dr. Tolleson's recommendation under advisement and bring some recommendation back to the House at a later session, it will be appreciated.

#### *Fee Schedule—Workmen's Compensation Act*

*Dr. J. J. Clark (Atlanta):* During the past year, Fulton County Medical Society has had under investigation certain parts of the Workmen's Compensation Law. The delegates of this society are requested to ask the cooperation of the State Association in amending the Workmen's Compensation Act so that the employee shall have the free choice of a physician, from a list of physicians furnished by the local society. And that the liability for the care of those injured be unlimited.

The second part of it is that the State Association adopt a fee schedule. I would like to request that Dr. Benson discuss this subject. He was Chairman of this Committee in Fulton County. After I make a motion, I want him to speak. I move that the President appoint a committee of five to bring in a fee schedule for contestable cases, similar to the one adopted by the Fulton County Medical Society, and report Friday morning.

*President Richardson:* You have heard the motion of Dr. Clark, that a committee of five be appointed by the Chair. Dr. Clark, would it be agreeable to you to have the Committee on Medical Economics serve as that committee, or would you like for a new committee to be appointed?

*Dr. Clark:* It would seem to me that a committee of that type should be men who are doing compensation work, perhaps in the larger centers or industrial centers, as it comes up to them more often than to a general man. I believe that a special committee would be the best on that.

*President Richardson:* You have heard the motion, that a special committee of five be appointed to set up a fee schedule for workmen's compensation cases. Did you embody in that motion that anything in reference to the Workmen's Compensation Laws—

*Dr. Clark:* That the State Society attempt to assist in amending the Compensation Law as it now is. I include in that motion.

*President Richardson:* That would have to be referred to the Committee on Public Policy and Legislation.

*Dr. Clark:* That is satisfactory, that that part go to the Committee on Public Policy and Legislation.

The motion was regularly seconded.

*Dr. M. T. Benson (Atlanta):* In Georgia, one of the few states that have not a guide in compensation,

or a contract practice law in the way of fees, the Fulton County Medical Society some six months ago appointed a special committee to work this matter out. We worked on it for six months and we brought in a report which was adopted, setting up a schedule of fees to guide in this kind of work.

This fee schedule applies more to the larger centers than it does to the rural districts, but we had a conference with the men who paid the bill, the insurance carriers, and got their opinion and their advice, and they assisted us in preparing this fee schedule.

The object is that in the case of any physician who is recommended by the local society, who is competent to do this work, these cases can be referred to him, and insurance companies or the carriers will not be charged one fee by one doctor and another fee by another doctor. It distributes the work out more evenly, it helps every doctor who is doing this work, and the carriers were anxious that a fee schedule be adopted.

Upon the recommendation of the Fulton County Medical Society, we bring this matter to you and ask that you appoint this committee, and, if it is the wish of the Association, adopt the fee schedule.

*President Richardson:* Is there any further discussion? Are you ready for the question? As I understand this motion, you are asking for a committee to study this and report back at a subsequent meeting. You realize, of course, that this committee has no jurisdiction in setting up a fee schedule. It can simply make a recommendation. Then the question is going to arise as to whether this body can adopt a fee schedule.

*Dr. Clark:* This state is one of the few states that do not have a fee schedule. This fee schedule has been worked out with the Insurance Commissioners and with the employers, and it is satisfactory to them, and we believe it is a fair schedule for the doctors. It will necessarily later have to be accepted possibly by the state legislature. But if we can adopt a fee schedule affecting each and every one of us the same, it will do away with some of the troubles we have had on contract practice of underbidding or overbidding, overcharging, and so on, that continually keeps the society stirred up.

*Dr. R. L. Miller (Waynesboro):* I do not think this would hurt, because even in the matter of obstetrics, in some sections, for instance in my county we charge \$50 for ordinary cases, and in adjoining counties they charge \$25, and in another county they charge \$15.

*Dr. Clark:* This is for accident cases on employees' liability.

*Dr. Miller:* You cannot adopt a fee schedule that will be uniform throughout the state, because some men put a higher value on their services than others. We think we are entitled to \$50 for an obstetrical case, and men in other counties think they are worth only \$15, and so on. I think it should be larger, but to try to make a uniform fee throughout the state—you are not going to be able to do it.



*Dr. Benson:* This fee schedule has nothing to do with medicine of private practice. This schedule is for the compensation of contract practice, in which we have a commission already, the Workmen's Compensation Committee. This has nothing to do with your private practice, except for compensation on contract work, and does not enter into this line that Dr. Miller speaks of at all. It is a fee schedule that I think the commission would want. Most of the states have a fee schedule, some higher, most of them higher than we have adopted.

*Dr. Miller:* Mr. President, my point is that this committee would make a suggested fee bill, but not adopt one. Will you make that as your motion, that it be a suggested fee bill, instead of an adopted fee bill? The members of this Association may adopt a fee bill smaller than I would want to work for, and I would feel that I would have to work for it nevertheless. I think if he would make a suggestion instead of adopting a fee bill, it would be better.

*President Richardson:* This motion is not to adopt a fee bill. The motion is to appoint a committee to suggest a fee bill to be adopted at a subsequent meeting of this body. Is there any further discussion on the motion? If not, those in favor please say "aye"; opposed "no". The motion is carried.

Is there any other new business?

*First Vice-President Applewhite:* As a Delegate from the Bibb County Medical Society, I wish to present this resolution:

*Physicians Not To Be Required To Divulge Confidential Information Of Patients*

"Whereas, In the relation between physicians and patients it frequently becomes necessary that the patient reveal to the physician matters of a decidedly personal nature which the physician is honor-bound to keep secret, therefore, be it

"RESOLVED, That the Committee on Public Policy and Legislation of the Medical Association of Georgia be requested to draft such regulations to be enacted into law by the next General Assembly that will protect all patients in such cases and will exempt medical men from divulging in legal procedures whatever confidences that may have been imposed in them by any patient whatsoever."

I move the adoption of that resolution.

*President Richardson:* The substance of the motion is that the Committee on Public Policy and Legislation be requested to draft appropriate legislation to be submitted to the Georgia Legislature at its next session, to protect confidential relations between the physician and the patient. Is there a second to the motion?

*Dr. R. L. Miller (Waynesboro):* I second the motion.

*President Richardson:* Is there discussion? If not, those in favor of the motion please say "aye"; opposed "no". It is carried.

Is there any other new business?

*Cup Donated By The Ware County Medical Society—  
Outstanding Work In Hookworm Control*

*Dr. W. F. Reavis (Waycross):* I wish to present the following resolution:

"WHEREAS, We, the members of the Ware County Medical Society, realize that there is yet much work to be done in the eradication of hookworm disease in the state of Georgia, and

"WHEREAS, We desire to aid, and cooperate in this work to the fullest extent, therefore, be it

"Resolved That, in order to promote interest, and to encourage fresh effort to be made toward this end, a cup be offered by the Ware County Medical Society to be engraved each year with the name of that physician who, in the opinion of a committee to be appointed by the President of the Medical Association of Georgia, has done the most outstanding work in this field, and that this cup be placed in the archives of the State Capitol in Atlanta; and be it further

"RESOLVED, That our Delegate be instructed to place this resolution before the House of Delegates for its consideration.

"The above resolution adopted at a regular meeting of the Ware County Medical Society, May 2, 1934.

"Signed—K. MCCULLOUGH, Secretary"

It is our desire to stimulate a little more the work in regard to hookworm disease as against the work we are doing at the present time. We are getting aid from our County Health Officers. They need some help. It is not to take away from anyone or add to anyone, but we wish to make that recommendation.

I make that as a motion.

The motion was regularly seconded.

*President Richardson:* Is there any discussion? If not, those in favor say "aye"; opposed "no." It is carried.

Is there any other new business?

Fee Schedule-Federal Emergency Relief Administration

*Dr. S. T. R. Revell (Louisville):* I have a question that I should like to bring before the House of Delegates. It is that of the fees that we receive for services rendered to the indigent of the state, paid by the Federal Government. The fees seem reasonable, so far as those pertaining to the corporate limits of the town are concerned, but I cite this case: (Of course it was my privilege to refuse to go.) The Director of the CWA or QRT in Jefferson County told me that there were people sick some twelve or fourteen miles from Louisville, and the fee paid for services rendered to those sick ones was \$2. That seems a very insignificant fee, no fee at all, and I should like to bring it up before the House of Delegates and have the opinion of the members of the House of Delegates concerning those fees. It looks as though we should be entitled to some remuneration for mileage, and I should like to have a discussion on it, particularly among those of us who practice in rural communities. It does not touch those who live in large cities, but it is quite an item to those who live in small towns.

*President Richardson:* Do you wish to make it in the form of a motion, in order to get this matter before the House of Delegates? We cannot just informally discuss it.

*Dr. Revell:* Mr. President, I make a motion that we have a fee of 25 cents a mile, that is 12½ cents, or 25 cents one way, for these patients who are unable to pay.

*President Richardson:* The motion is that we have a fee of 25 cents per mile, one way.

*Dr. Revell:* In addition to the call, which is \$2. The motion was seconded by several.

*President Richardson:* It would seem to the Chair that it would be better to make this motion in the form of a request for this fee, because we cannot set the fee. We could petition the Federal Relief Administrator in Georgia to allow a 25-cent-a-mile fee one way, but I do not know of any way for this body to set that fee.

*Dr. Revell:* I do not want to attempt to be an arbiter in determining what the plan of Mr. Roosevelt and his wise counsels might suggest, but I only wanted to get action by the Medical Association of Georgia. I want to get their idea, and it is with that idea in mind that I make this motion. There is one thing we can do—we can either get that fee or refuse to serve.

*President Richardson:* Would you like to introduce a resolution that we petition the Administrator for a 25-cent-a-mile fee one way, in Federal relief cases? I think that would be in order.

*Dr. Revell:* I thank you for the suggestion. I make that motion.

*Dr. Miller:* I second it.

*President Richardson:* The motion is that it is the sense of the House of Delegates that we petition the Federal Relief Administrator to allow a fee of 25 cents a mile one way, in cases on Federal relief rolls. The motion has been duly seconded.

*Dr. M. C. Pruitt (Atlanta):* I want to discuss this, because I was one of the original committee that tried to raise this for the state and tried to keep up the mileage fee.

It is a rule among state organization employees that five cents per mile is the mileage fee that is given to all the various departments, and on this basis was their chief argument. We presented at that time our argument. Understand we cannot decide this by ourselves, because we are asking for something. Dr. Bunce was largely the spokesman of the organization, and he explained it, and the committee supported him as much as possible, that this was not the common need, that the man who was getting five cents a mile was being paid a salary, so time was not an element, but with the doctor, the only thing he had was his time. For that reason, he was due some compensation for the time when he was going to and fro.

The argument presented by the Relief Association was that if they were given fifteen cents a mile each way (I believe that is the amount we were contending for at that time), or thirty cents a mile, which is more than your resolution calls for, a man would

probably make a call down at the lower end of the county, and those cases would come up so often, so they wanted a flat rate, or a flat mileage basis.

It was turned down because they had no way of controlling that particular feature, or the extent to which a man would go. That is to say, most of these cases belonged to people who are unable to pay, or the low-income group, and they should receive the service from the man nearest to them, and for that reason they insisted on this five cents a mile.

That is what you are going to have to contend with, to try to increase the mileage of the fee schedule, and I doubt—the committee of the State Association was received very cordially, and they considered the problems in a very mutual way, and it was determined by increasing the fees, and we thought we got a good adjustment of the fees. This is not as satisfactory as we would like to have it. In Fulton County, we cannot get any of this relief. This bill specifically states that where there are, in counties or districts, no charitable organization to take care of them, this applies. In counties or municipalities where charitable organizations or institutions have been taking care of these relief patients, they are to continue to so long as they are able to carry the burden. We are still having to care for those we have cared for for many years. If we bring up the question of the mileage schedule it will cause a lot of contention, and we are not going to get anywhere. They were very liberal. We have a higher fee schedule than they have in most of the southern states. I think we have a friendly relation with the Relief Administrator in Georgia, and for that reason I would hesitate to insist on a higher schedule.

*Dr. Miller:* I should like to hear from Dr. Bunce. He has some information that he imparted at the last meeting of our medical society. We refused to make any call outside of the corporate limits of our communities without mileage, and Dr. Bunce told us in Statesboro there was something else brewing in the way of zoning.

*Secretary Bunce:* I think this is one of the most important things we have had up for consideration. This Association has never had a committee that worked harder and tried harder to get your mileage than this committee did. Otherwise, your fee schedule is as good as any fee schedule in the United States, if they would not cut out the mileage on us. That does not effect the doctor in the city, because he does not get any of this work.

Here is a question raised by Miss Shepperson. She said, "Dr. Bunce, I am particularly anxious to know the type of medical service these people are getting. Are they getting the best medical service that can be given them?" She raised that question, before she raised the question of the amount she was going to pay. She stated that some of our members, some of the best doctors in Georgia, do the work that is convenient to them in their community. One man showed me one day five orders for obstetrical cases within a mile or two of his home. He takes that from patients from whom he would get nothing, and refuses to go further. She states that the government has very little



money to spend on this thing, and in March they spent about \$35,000 for medical care in Georgia, and they want to give these people good service and want to pay the doctors.

Very frankly, I believe the Administration in Georgia has given us all they could give us.

The latest thing suggested is that they have zones, with so much for a visit within a two-mile zone, so much for five miles, so much for ten, and so on. I feel sure that would be satisfactory to our members.

The Administrator's office in Atlanta is now working on a report to come to the Medical Association of Georgia, showing what they have been doing in Georgia in the way of medical relief. That report has not yet arrived. I feel sure it will come in, and since I think this body should have that report before taking definite action. I am going to move that this question be referred to the Reference Committee, so that this report may be turned over to the Reference Committee if it comes in before we meet again, and let the Reference Committee bring in a resolution as it sees fit, to meet the requirements of the case.

*Dr. Miller:* Is any headway being made in the zoning project?

*Secretary Bunce:* Yes, there is.

*Dr. Bunce's* motion was regularly seconded.

*President Richardson:* You have heard the motion of *Dr. Bunce*, that this matter be referred to the Reference Committee, and this motion, I understand, has been seconded. This motion naturally takes precedence over the original motion. Is there any discussion on *Dr. Bunce's* motion? If not, all in favor of the motion that this matter be referred to the Reference Committee for a report please make it known by saying "aye"; opposed "no." It is carried.

Is there any other business? The Secretary will announce the committee that *Dr. Clark* asked for.

*Secretary Bunce:* The committee is *Dr. Marion T. Benson*, Chairman; *Dr. O. H. Weaver*, Macon; *Dr. W. H. Myers*, Savannah; *Dr. R. L. Rhodes*, Augusta; *Dr. Grady N. Coker*, Canton.

*Parliamentarian Simmons:* May I ask that the committee that has been appointed advise this body of the time and place of their meeting, so they might have the collaboration or arguments or expression of opinion from the various portions of the state regarding the schedule of fees?

*Dr. Benson:* We will meet tomorrow at nine o'clock on the Mezzanine floor.

*President Richardson:* I will ask that the Reference Committee take all the suggestions that have been made in an informal way, and if they care to consider them or make any recommendations about them, they are at liberty to do so. If not, they are not bound by any recommendation.

The next meeting of the House of Delegates is to occur at eight-thirty Friday morning, unless it is the wish of this body that you meet earlier.

*Parliamentarian Simmons:* I move that we recess, subject to the call of the President. If some of the

committees are ready to report a little later, we can have a session before then, so as to keep from prolonging that session. I move that we recess, subject to the call of the President, to be announced in the general session.

*Dr. Miller:* I move that we adjourn until eight-thirty Friday morning.

*Dr. Miller's* motion was regularly seconded.

*President Richardson:* Is there any discussion? If not, those in favor of the motion say "aye"; those opposed "no." The motion is carried.

The meeting adjourned at five-thirty o'clock.

ALLEN H. BUNCE, M.D.

Secretary-Treasurer

(To Be Continued)

## OFFICERS AND COMMITTEES MEDICAL ASSOCIATION OF GEORGIA 1934-1935

EIGHTY-SIXTH ANNUAL SESSION, ATLANTA  
MAY 7, 8, 9, 10, 1935

### Officers

President.....	Clarence L. Ayers, Toccoa
President-Elect.....	Jas. E. Paullin, Atlanta
First Vice-President.....	Geo. A. Traylor, Augusta
Second Vice-President.....	Walter G. Elliott, Cuthbert
Secretary-Treasurer.....	Allen H. Bunce, Atlanta
Parliamentarian.....	John W. Simmons, Brunswick

### Delegates to the A. M. A.

William H. Myers (1935-6).....	Savannah
Alternate, Wm. A. Mulherin.....	Augusta
Chas. W. Roberts (1935-6).....	Atlanta
Alternate, Marion C. Pruitt.....	Atlanta
Olin H. Weaver (1934-5).....	Macon
Alternate, C. K. Sharp.....	Arlington

### Council

J. A. Redfearn, Chairman.....	Albany
Grady N. Coker, Clerk.....	Canton

### Councilors

1. C. Thompson (1936).....	Millen
2. J. A. Redfearn (1936).....	Albany
3. J. C. Patterson (1936).....	Cuthbert
J. Cox Wall (1935) Old 12th.....	Eastman
4. Kenneth S. Hunt (1936).....	Griffin
5. W. A. Selman (1937).....	Atlanta
6. H. G. Weaver (1937).....	Macon
7. M. M. McCord (1935).....	Rome
8. J. E. Penland (1937).....	Waycross
9. Grady N. Coker (1935).....	Canton
10. S. J. Lewis (1935).....	Augusta

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2. Chas. H. Watt (1936).....	Thomasville
3. J. Cox Wall (1936).....	Eastman
4. Enoch Callaway (1936).....	LaGrange
5. Marion C. Pruitt (1937).....	Atlanta
6. H. D. Allen (1937).....	Milledgeville
7. H. L. Erwin (1935).....	Dalton
8. H. M. Tolleson (1937).....	Hahira
9. J. K. Burns (1935).....	Gainesville
10. H. M. Fullilove (1935).....	Athens

## COMMITTEES

*Scientific Work*

Joseph Yampolsky, Chairman (1935)	Atlanta
S. T. R. Revell (1936)	Louisville
Geo. A. Traylor (1937)	Augusta
Allen H. Bunce, Secretary-Treasurer	Atlanta

*Public Policy and Legislation*

Dan Y. Sage, Chairman (1937)	Atlanta
Grady N. Coker (1935)	Canton
A. R. Rozar (1936)	Macon
Allen H. Bunce, Secretary-Treasurer	Atlanta
T. F. Abercrombie, Director, Department of Public Health, State of Georgia	Atlanta

*Medical Defense*

Frank K. Boland, Chairman (1938)	Atlanta
J. O. Elrod (1936)	Forsyth
Wm. A. Mulherin (1939)	Augusta
J. A. Redfearn, Chairman of Council	Albany
Allen H. Bunce, Secretary-Treasurer	Atlanta

*Hospitals*

R. H. Oppenheimer, Chairman (1937)	Atlanta
Geo. F. Klugh (1935)	Atlanta
Arthur D. Little (1936)	Thomasville
D. Henry Poer (1938)	Atlanta
C. D. Whelchel (1939)	Gainesville

*Abner Wellborn Calhoun Lectureship*

Jas. E. Paullin, Chairman (1938)	Atlanta
H. I. Reynolds (1939)	Athens
Eugene E. Murphey (1935)	Augusta
Craig Barrow (1936)	Savannah
Frank K. Boland (1937)	Atlanta

*Economics*

Wm. A. Mulherin, Chairman (1935)	Augusta
C. W. Roberts (1938)	Atlanta
C. L. Ridley (1936)	Macon
Dan Y. Sage (1937)	Atlanta
J. H. Downey (1939)	Gainesville

*Necrology*

A. J. Mooney, Chairman	Statesboro
F. Phinzy Calhoun	Atlanta
Thos. J. McArthur	Cordele

*Medical History of Georgia**Sub-Committee*

Frank K. Boland, Chairman	Atlanta
William R. Dancy	Savannah
Arthur G. Fort	Atlanta

*Crawford W. Long Memorial Prize*

William R. Dancy, Chairman	Savannah
Stewart R. Roberts	Atlanta
V. P. Sydenstricker	Augusta
George Bachmann	Atlanta
Edgar R. Pund	Augusta

*Cancer Commission*

J. L. Campbell, Chairman	Atlanta
William H. Myers	Savannah
Chas. H. Watt	Thomasville
Emory R. Park	LaGrange
Chas. C. Harrold	Macon
R. M. Harbin	Rome
Albert F. Saunders	Valdosta
Grady N. Coker	Canton
G. T. Bernard	Augusta
Mrs. J. Bonar White, Ex-Officio—Woman's Auxiliary	Atlanta

*Advisory-State Board of Health*

C. W. Roberts, Chairman	Atlanta
Wm. H. Myers	Savannah
M. M. McCord	Rome
M. E. Winchester	Atlanta
Marcus Mashburn	Cumming
H. M. Tolleson	Hahira
T. F. Abercrombie	Atlanta

*Advisory Committee—Woman's Auxiliary*

B. H. Minchew, Chairman	Waycross
Jas. N. Brawner	Atlanta
Chas. H. Richardson	Macon
J. E. Penland	Waycross
C. G. Butler	Gainesville

*L. G. Hardman Silver Loving Cup*

W. A. Selman, Chairman	Atlanta
Wm. A. Mulherin	Augusta
Chas. H. Watt	Thomasville
Wm. H. Myers	Savannah

*Crawford W. Long Bronze Statue To Cooperate With Chamber of Commerce, Jefferson, Georgia*

Garnett Quillian, Chairman	Atlanta
E. M. McDonald	Jefferson
S. T. R. Revell	Louisville
Wm. H. Myers	Savannah
Chas. W. Crane	Augusta

*Study of Maternal Mortality and Infant Deaths*

E. D. Colvin, Chairman	Atlanta
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*First District*

Guy G. Lunsford	Millen
A. J. Waring	Savannah

*Second District*

I. M. Lucas	Albany
S. L. Cheshire	Thomasville

*Third District*

Carl P. Savage	Montezuma
J. C. Patterson	Cuthbert

*Fourth District*

Thos. S. Bailey	Newnan
S. C. Rutland	LaGrange

*Fifth District*

J. R. McCord	Atlanta
E. D. Colvin	Atlanta

*Sixth District*

Edward B. Claxton	Dublin
J. D. Applewhite	Macon

*Seventh District*

P. O. Chaudron	Cedartown
J. E. Lester	Marietta

*Eighth District*

John W. Simmons	Brunswick
G. T. Crozier	Valdosta

*Ninth District*

M. B. Allen	Hoschton
D. H. Garrison	Tate

*Tenth District*

S. S. Smith	Athens
Wm. A. Mulherin	Augusta

*Ex-Officio*

T. F. Abercrombie, Director, Department of Public Health for Georgia	Atlanta
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*Fraternal Delegates to Other State Meetings*

To Visit Alabama—H. J. Goodwyn, Carrollton; and J. T. McCall, Rome.	
To Visit Florida—Arthur G. Fort, Atlanta; and Wm. S. Goldsmith, Atlanta.	
To Visit North Carolina—John K. Burns, Gainesville; and Bradley B. Davis, Gainesville.	
To Visit South Carolina—Wm. R. Dancy, Savannah; and Wm. A. Mulherin, Augusta.	



To Visit Tennessee—E. O. Shellhorse, Dalton; and  
Z. V. Johnston, Calhoun.  
Fraternal Delegate to the Georgia Dental Association  
Emmett D. Highsmith.....Atlanta  
Fraternal Delegate to the Georgia Pharmaceutical  
Association

Glenville Giddings .....Atlanta  
Fraternal Delegate from the Georgia Dental Association  
C. C. Howard, D.D.S.,.....Atlanta

## INFANTILE SPINAL PARALYSIS CURED

### Case Report

A. A. BARGE, M.D.  
Newnan

August 15, 1933, I was called to see a lad of fifteen. Found him lying on a cot with both arms and both legs completely paralyzed. He could not close his hands so as to make his thumbs touch his fingers, had no grip in his hands, could not move his legs, unable to turn himself on his cot, could not stand on his feet when held up, temperature normal, mind clear, all the paralyzed muscles were flaccid and remained so until he was cured. Under close observation for it, no spasticity was ever observed in any of the paralyzed muscles. He complained of occasional pains in his arms and legs and back, which recurred occasionally for four or five days, but gradually growing less painful each day until pain ceased altogether.

### History As Given By the Lad

He said he felt very badly for four or five days before I saw him. Was very weak and vomited several times during the first three days and felt extremely weak. His legs and arms began feeling like they were asleep which gradually grew worse until he discovered they were paralyzed. He said he was given purgatives and was thoroughly purged before I saw him. He had had no headache at any time during this illness.

September 15, 1933, patient was walking around in the house, going to the dining-room and feeding himself. October 17, 1933, he was out visiting his neighbors, and to show me he was able to visit he stood on one foot swinging the other leg in any direction requested, then changing feet he swung the other leg as the first was swung, then threw his arms in all directions any lad of sound limbs could. Today, December 18, 1933, he was in my office and hopped across my office on one foot and returned on the other foot, and all this he did after walking two miles. I pronounced him cured.

### Poliomyelitis Acute Anterior

Since Goldscheider's investigations point to the important role played by the blood vessels of the spinal cord and shows that the degenerative changes occur most distinctly near the infected and dilated blood vessels, and that the degenerated ganglion lie in the vascular area, I felt sure, with my experience in treating infected blood vessels, that I had something that would overcome that infection and prevent the degeneration of the ganglion cells caused by the infected dilated blood vessels of the cord.

### Treatment in Detail is Given Below

August 17, 1933, I took one ampule of 1 cc Manganese Butyrate 1 per cent with Benzyl Alcohol 2 per cent, put up by George A. Breon & Company, Inc., sawed and broke off top of ampule, then took my regular hypodermic needle and wet it with liquid carbolic acid and drew out the contents of the ampule then wet my needle again with carbolic acid, then proceeded to press down the gluteal muscle with my left hand and insert the needle with my right hand then remove my left hand and withdraw the needle about an eighth of an inch before inserting the contents so as to be sure the contents are not entering a blood-vessel. No boiling the needle necessary nor any cleansing of the patient's skin necessary if done as directed above. Never use iodine nor alcohol nor anything wet to clean your patient before nor after inserting your needle wet with carbolic acid as directed. The carbolic acid will take care of your patient better than anything else you can do. I gave 1½ cc Manganese Butyrate on the following dates: August 17, 21, 27, September 2, 8, 18, 25, and October 4th. I taught his mother how to massage his arms and legs and directed her to take ten minutes three times each day massaging his muscles. She was taught to stand in front of patient and take his hand in both her hands and begin pressure next to his hand and gradually climb with her hands to his shoulder, pressing out the venous blood and massaging his muscles at the same time. His legs were treated in the same manner. The massage was kept up until patient was up and running around taking exercise. He was given 7½ grains formin dissolved in a glass of water night and morning. His bowels were kept regular by the use of cascara compound (Hinckle) tablets. One at bedtime if bowels failed to act during the day.

### Diet

He was given a fresh raw egg, beaten with a fork and stirred well in a glass of fresh sweet milk three times a day, no meats were allowed, but cereals and butter and soups if he liked. Nicotine was not allowed under any guise, as smoking, chewing or dipping, nor was caffeine allowed, such as coffee, tea and coca-cola. He was allowed orange juice and lemonade and plenty of good water.

It has been my privilege to try to heal the sick for forty-three years, and during that time have had a number of cases of poliomyelitis acute anterior but no case was ever so extensively and completely paralyzed as this case and yet not one of them escaped being crippled, more or less, for life. I am, therefore, unable to escape the conviction that the treatment in this case had much to do with the complete recovery of this patient.

For a child one year old give ¼ cc as initial dose, in four days double the dose and every five days increase the dose slightly until the dose reaches 1 cc. For adults give 1 cc as initial dose and four days later give 1½cc, five days later give 2 cc and keep it up until patient is cured. Be sure not to inject into a blood vessel. One need not fear abscess, but may

(Continued on Page XVII)

**THE JOURNAL**

OF THE

**MEDICAL ASSOCIATION OF GEORGIA**

Devoted to Welfare of Medical Association of Georgia

139 Forrest Avenue, N.E., Atlanta, Ga.

AUGUST, 1934

**ASSOCIATION ACTIVITIES**

In this issue of the Journal we are publishing the transactions of the first meeting of the House of Delegates at the Augusta session. This session will be long remembered on account of the large attendance, the hospitality of the Richmond County Medical Society, the people of Augusta and the large amount of constructive work reported by the many committees of the Association.

The reports of the officers of the Association and all standing committees are also recorded in full in this issue. It behooves every member of the Association to read these reports and discussions.

The Association had an unusually successful year notwithstanding the depression extending over the entire country. The officers and members of all committees gave untiringly of their time and services to further the interests of the members of the Association and the people of Georgia. A great deal was accomplished.

The minutes of the House of Delegates including further discussion and final action on many of the questions presented at the first meeting of the House will be continued in the next issue of the Journal.

Paid membership in the Association during the past year showed a substantial increase. Every member is urged to vision our future and work to improve our standards of practice in the interest of the profession and for the welfare of our clientele.

All work and interest by officers or constituent societies will aid magnificently in furthering the just claims of our members to a more elevated position in the views of the people and agents of governmental activities.

The office of the Association is eager to cooperate with all members and officers for our mutual benefit and we invite your suggestions.

**MEDICAL ETHICS AND NEW METHODS OF PRACTICE**

Gradual changes in the nature of our civilization have brought ever more complex problems for solution by the medical profession. As has been stated repeatedly in these columns, the ethical principles which guide medicine are fundamentally so sound that they may be adapted to any situation arising in medical practice, provided those concerned wish to observe the spirit of these principles. Nevertheless, physicians involved in new types of organization, such as contract practice, industrial practice, hospital practice, university practice, and the practice of medicine by lay corporations which employ physicians, have been brought before the judicial councils and committees on ethical relations of various medical bodies, because of infringements of these ethical principles. In some cases there have apparently been difficulties, the Judicial Council of the American Medical Association, at the Cleveland session, presented three amendments to the Principles of Medical Ethics. These were heartily endorsed by the Reference Committee on Amendments to the Constitution and By-Laws and then adopted by the House of Delegates as guiding principles for organized medicine.

*The JOURNAL would like to record the scientific work of Georgia doctors. It earnestly requests, therefore, that each physician in the State who publishes a contribution in some other medical periodical submit an abstract of the article for these columns.*

The term "contract practice" is anathema to the vast majority of individual practitioners in this country, yet contracts of all kinds are matters of daily life in all forms of industry. Conceivably there are situations in which the practice of medicine under a contract may be necessary or desirable. In order to elucidate this phase of medical practice, the Principles of Medical Ethics, chapter II, article V, section 2, is now amended by addition of the following wording:

By the term "contract practice" as applied to medicine is meant the carrying out of an agreement between a physician or a group of physicians, as principals or agents, and a corporation, organization or individual,



to furnish partial or full medical services to a group or class of individuals for a definite sum or a fixed rate per capita.

Contract practice per se is not unethical. However, certain features or conditions if present make a contract unethical, among which are: 1. When there is solicitation of patients, directly or indirectly. 2. When there is underbidding to secure the contract. 3. When the compensation is inadequate to assure good medical service. 4. When there is interference with reasonable competition in a community. 5. When free choice of a physician is prevented. 6. When the conditions of employment make it impossible to render adequate service to the patients. 7. When the contract because of any of its provisions or practical results is contrary to sound public policy.

Each contract should be considered on its own merits and in the light of surrounding conditions. Judgment should not be obscured by immediate, temporary or local results. The decision as to its ethical or unethical nature must be based on the ultimate effect for good or ill on the people as a whole.

Group practice and clinical practice are also phases of medical work that have aroused opposition in many communities, because of the introduction of advertising methods and commercial promotion in their work. In some places groups or clinics have employed business managers, unfamiliar with the medical point of view, who have attempted to introduce unprofessional methods into medical practice. In order to establish the proper relationship between groups and clinics with the individual practice of medicine, the Principles of Medical Ethics will now contain the following statement:

The ethical principles actuating and governing a group or clinic are exactly the same as those applicable to the individual. As a group or clinic is composed of individual doctors, each of whom, whether employer, employee or partner, is subject to the principles of ethics herein elaborated, the uniting into a business or professional organization does not relieve them either individually or as a group from the obligation they assume when entering the profession.

Regardless, however, of the damage wrought to scientific medicine by physicians who engage in contract practice or by groups of physicians competing with the individual practitioner, the worst possible type of new methods in medical practice is the incorporation by business men of organizations to engage in the practice of medicine, employing physicians on salaries and exploiting the services of these physicians unethically to the public. The most conspicuous example of

such an organization is the United Medical Service, Inc., which began a few years ago to advertise its services to the people of Chicago. Regarding such types of medical practice, the Judicial Council was definite. The Principles of Medical Ethics now contains the following statement:

It is unprofessional for a physician to dispose of his professional attainments or services to any lay body, organization, group or individual, by whatever name called, or however organized, under terms or conditions which permit a direct profit from the fees, salary or compensation received to accrue to the lay body or individual employing him. Such a procedure is beneath the dignity of professional practice, is unfair competition with the profession at large, is harmful alike to the profession of medicine and the welfare of the people, and is against sound public policy.

As was stated in the introduction to these comments, these modifications of the Principles of Medical Ethics do not in any way modify the basic character of these principles. The Principles of Medical Ethics was established for the protection of the public primarily. Methods of promotion that sell medical practice on the basis of exaggerated claims, on a fee basis rather than the quality of service rendered, methods of practice that break down the intimate personal relationship that must exist between doctor and patient; methods that delegate the responsibility of the attending doctor to a group or a corporation or a business manager, carry with them a menace to the life and health of the people who are served.

Physicians will do well to familiarize themselves with these new statements of principle, now a part of the ethics of organized medicine. The young physician who is tempted by the offer of some commercial agency to enter into such schemes or combinations should bear in mind that he thereby jeopardizes his entire future in the practice of medicine and sacrifices the medical birth-right for which he has already paid six or seven years of his life.—*J.A.M.A.*, July 28, 1934.

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The Medical Association of Georgia will hold its Eighty-Sixth Annual Session in Atlanta, May 7, 8, 9, 10, 1935.

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The American Medical Association will hold its Eighty-Sixth Annual Session in Atlantic City in 1935.

## TO BE LITERATE IS NOT TO BE LITERARY

With the July issue of the Journal, we started publishing notice of a service which we believe many physicians would do well to use—a service for the writing, editing, and typing of scientific papers. Not many physicians realize how few members of the profession submit articles for publication in such form as to require little editing or re-writing. It is no reflection on the literateness of the profession to make this statement. Physicians are accustomed to expressing themselves in speech, not in writing. Writing differs from talking far more than most people, except professional writers, realize. For example, few people are aware that almost everyone's writing vocabulary is in marked contrast to his speaking vocabulary. Lacking the warmth and color of the speaker's personality, and converted instead into the cold dispassionateness of print, written words are given a handicap in competition with spoken words. Only art can overcome that handicap. Art, although necessarily founded on a natural aptitude, requires training and practice to reach a high development. Medical practice is the physician's art. There are other persons whose art is putting words together in such a way that they come alive through the medium of print.

The first requirement of a medical manuscript is a clear cut idea on the author's part of what he desires to communicate to his fellow-physicians. Most people have such an idea to start with. But to develop this idea section by section and paragraph by paragraph, from premise through exposition to conclusion, in such fashion as to make it lucid and logical to the reader; and to construct the individual sentences so that they are not confusing or involved but read easily and smoothly—this can only be done by one who has both a special gift and special training for such work. That is why even the most successful business and professional men employ what are called "ghost writers"—persons trained in the art of writing, who will know how to set forth the originator's thoughts and ideas so that they have in print the same clarity and forcefulness with which the living personality invests them in speech.

Only an editor knows how small a percentage of medical men possess this ability. Only an editor knows how much time he and his staff devote to making fit for publication articles which have worthy ideas but which suffer from inadequate presentation. Only an editor knows what a surprising number of physicians can not punctuate properly and can not correctly spell many medical and lay

words used in their articles. Only an editor knows how often patience and eyesight are sorely tried because of poor typing.

As stated above, none of this is any reflection on the intelligence of medical men. Quite aside from everything else, they are too busy with practice to be able to spare the time which meticulous care in writing consumes. Examined in the cold light of reason, it should be evident that it is as natural for a physician to employ some one to do the detail work for him when he writes a medical paper or book as it is for him to employ a technician to make a chemical analysis of the blood when a patient is suspected of having diabetes or nephritis, or to expect interns and nurses to prepare and hand to him instruments and sponges during an operation.

If physicians appreciated the value of properly constructed and attractively typed manuscripts, they would gladly pay to have such work done. In the rush of an editorial office, as everywhere else in life, first impressions often play an important role. One physician might submit a paper on a fairly commonplace subject, but a paper which he had had competently edited and well typed; another might submit a paper on a far more worthy subject, but a paper which, through poor construction and bad typing, is difficult to read. It could happen—and indeed it often does happen—that the first paper is placed in line for early publication and receives a front position in the medical journal; whereas the second paper is laid aside to await editing on that rare occasion—a day when an editor has a little extra time on his hands.

Wouldn't you prefer to be in the first fellows shoes?—H. C.

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### HONOR ROLL FOR 1934

1. Randolph County, Dr. G. Y. Moore\*, Cuthbert, December 12, 1933.
2. Macon County, Dr. Thomas M. Adams, Montezuma, January 13, 1934.
3. Henry County, Dr. H. C. Ellis, McDonough, January 18, 1934.
4. Hancock County, Dr. H. L. Earl, Sparta, February 17, 1934.
5. Wayne County, Dr. A. J. Gordon, Jesup, March 12, 1934.
6. Monroe County, Dr. G. H. Alexander, Forsyth, March 19, 1934.
7. Ware County, Dr. Kenneth McCullough, Waycross, March 19, 1934.
8. Turner County, Dr. J. H. Baxter, Ashburn, March 24, 1934.
9. Lamar County, Dr. J. M. Rogers, Barnesville, April 2, 1934.
10. Whitfield County, Dr. H. J. Ault, Dalton, July 28, 1934.

\*Deceased.



## GEORGIA DEPARTMENT OF PUBLIC HEALTH

T. F. ABERCROMBIE, M.D., *Director*WHAT EVERY DOCTOR SHOULD  
KNOW ABOUT RABIES

No physician in Georgia can practice general medicine very long without being called upon to give advice as to the proper precautions to take as safeguards against rabies. This disease is widespread among dogs all over the state, so much so that in every case of dog bite the question arises at once whether or not prophylactic treatment should be given. Unfortunately, this question is always attended with a form of fear on the part of the victim or his family—a form of fear which stands in a class by itself and which is often a precursor of panic and hysteria.

Therefore, if the physician is not forearmed with a cool head and a knowledge of the essential facts regarding rabies in animals he is going to run into difficulties. The proper disposition of most cases of dog bite to the best interest of all concerned need not be difficult if the physician will keep in mind the following facts:

1. Rabies is a specific infection to which all warm blooded animals including man are susceptible. However, not all animals are equally capable of transmitting the infection to others. By far the most important transmitter of rabies is the dog; so much so that if there were no dogs there would be no rabies. Cats and other carnivores (meat eating animals) may transmit the disease to some extent but not as much so as the dog. Herbivores, such as cows, horses, sheep, etc., are very susceptible but are not capable apparently of transmitting the infection to other animals or to man.

2. Rabies is transmitted from animal to animal (or man) in nature entirely by way of the saliva and chiefly through the act of biting which allows the infectious saliva to be thrust through the skin and into direct contact with nerve fibers. The virus does not penetrate the unbroken skin. Furthermore, the infection from contact of the saliva with pre-existent abrasions or wounds is only theoretically possible. No authentic case in man or animal occurring from such exposure is known to the writer.

Other secretions and excretions of the rabid animal apparently do not contain the virus in sufficient amount to infect.

*The milk of cows even in the active stage of rabies is harmless and can be used raw for human consumption with impunity.*

3. The natural incubation period of rabies with rare exceptions ranges from two weeks to three or four months, averaging from three to four weeks. It includes that period from the date the animal is bitten until the active stage of the disease begins to set in. Once the symptoms appear the infection progresses rapidly and invariably terminates in death within a few days. Rarely does the animal live more than a week after the symptoms set in.

4. During the incubation period the virus of rabies is not present in the saliva and therefore *the bite of the animal during the incubation period is not infectious*. It is, of course, difficult at times to detect the very earliest beginning of active symptoms which may be so mild at first as to pass unnoticed for two or three days. Thus it is not possible to know just when the saliva begins to be infectious except that it is closely coincident with the onset of symptoms. It is the policy at the State Department of Public Health to advise antirabic treatment *only for those persons who were bitten or seriously exposed within one week prior to date visible symptoms were observed*.

5. The laboratory diagnosis for rabies is based chiefly on the microscopic finding of peculiar structures called Negri bodies in certain regions of the brain tissue. Negri bodies are strikingly characteristic in properly stained preparations. They are found only in the brains of animals in the active stage of rabies. They are not always demonstrable, however, and failure to find them even after a long search does not preclude the existence of the disease.

Negri bodies are found most abundantly in the brains of animals which have been allowed to die of rabies. The sooner the animal is killed after the active onset the less apt are Negri bodies to be found. Hence *it is always advisable to keep the suspected animal alive at least long enough to permit full development of symptoms. Better still, wait until the animal dies*. Often the suspected animal does not die. This can mean only one thing, that is, that it did not have rabies. Note—At this point the writer had to stop and talk to a father whose small child had been bitten on the face by a dog which at the time and prior thereto had shown no evidence of abnormality. After the dog bit the child the father carried it to the family physician who advised that the animal be

killed at once. This was done and the dog's head was brought to the laboratory for examination. No Negri bodies were found. The father was advised that while the dog was probably not rabid the fact that it was killed before the symptoms had been given opportunity to develop the brain examination could not be relied upon. Therefore, intensive treatment was prescribed as a precautionary measure. If this doctor had taken the trouble to learn what every doctor should know about rabies this child could very likely have been spared the trying ordeal of having to take thirty-one injections.

Certain other common diseases of dogs are often mistaken for rabies. Chief of these are black tongue. Space does not warrant a discussion of the differential diagnosis between these diseases and true rabies. Even the most experienced veterinarian cannot tell the difference at first observation. He will always advise, however, that the animal be kept alive and under observation.

6. Rabies among dogs occurs at all seasons of the year. Quite contrary to popular opinion it is not more prevalent in hot weather. It has been the experience of the State Board of Health laboratories during the past fifteen years that rabies is more common during the early spring months than at any other time.

Once the physician becomes acquainted with the foregoing essential facts about the disease he should have no difficulty with practically any rabies problem that may arise in his practice.

The State Department of Health issues to the Public a bulletin which contains the following rules of procedure in case of dog bite. Since these rules are based fundamentally on the information given above it may be worthwhile to include them here.

*Rule 1. Do Not Kill the Dog Unless Absolutely Necessary.*

Why? The animal may be in the early stage of rabies. If killed at this time the laboratory examination of the brain may show no evidence of this disease and yet the saliva may be infectious and dangerous. (Read Rule 2.)

*Rule 2. If Possible Capture the Dog and Keep It Confined for One Week.*

Why? If the animal remains well and alive for one week from the date of biting, this proves it was not rabid (or mad) at the time of biting. If the animal was in the early stages of rabies at the time of biting, it will rapidly grow worse and die or be in a dying condition within the period of one week.

The biting animal should be confined in such a manner that it will be impossible for it to escape and all persons and other animals should be kept away from it during the period of observation. When ever possible the biting animal should be placed under the observation of a licensed veterinarian. This will usually make possible an earlier diagnosis and avoid the danger of having a rabid animal in the home.

*Rule 3. If the Biting Animal Disappears and Cannot Be Captured.*

Every effort should be made to capture the biting animal and get it under observation. If this cannot be done within 24 to 48 hours the person bitten should seek the advice of a physician, health officer, or the State Board of Health in regard to whether or not he should be given the antirabic treatment. It is highly important that every person bitten on the face or severely bitten elsewhere should consult a physician or health authority at once.

*Rule 4. If One of a Group of Dogs Bites.*

When a person has been bitten by one of a group of dogs and there is a question as to which dog did the biting, the entire group should be confined and kept under observation for the one week period. If all the dogs in the group remain well and normal for one week there is no danger of rabies developing from the bite. If any one of the dogs in the group goes mad, the antirabic treatment should be taken by all persons bitten.

*Rule 5. Laboratory Examination.*

If for any or no reason the dog is killed or dies before the end of one week after biting, its head should be sent to the State Department of Health for examination. However, as stated in Rule 1, the failure to find evidence of rabies by this examination does not necessarily mean that the dog was not rabid. In such cases it is best to follow the advice of physician or health authorities as to the need for preventive antirabic treatment.

*Rule 6. If the Biting Dog Has Previously been Inoculated Against Rabies.*

While a dog that has been given a preventive antirabic treatment stands less chance of developing rabies than does the dog that has not received the treatment it is possible for such a dog to go mad.

Every biting dog regardless of whether or not it has had the preventive treatment should be confined and kept under observation as directed in Rules 1 and 2.

(Continued on Page XVII)



## WOMAN'S AUXILIARY OFFICERS

President—Mrs. J. E. Penland, Waycross.

President-Elect—Mrs. E. R. Harris, Winder.

First Vice-President—Mrs. Ralph H. Chaney, Augusta.

Second Vice-President—Mrs. J. M. Barnett, Albany.

Third Vice-President—Mrs. G. Hugo Johnson, Savannah.

Recording Secretary—Mrs. Warren A. Coleman, Eastman.

Corresponding Secretary—Mrs. B. H. Minchew, Waycross.

Treasurer—Mrs. Chas. H. Richardson, Macon.

Parliamentarian—Mrs. Mather M. McCord, Rome.

Historian—Mrs. M. F. Haygood, Alto.

Chairman Public Relations—Mrs. Evert A. Bancker, Jr., Atlanta.

Chairman Press and Publicity—Mrs. J. Bonar White, Atlanta.

Chairman Legislation—Mrs. Dan Y. Sage, Atlanta.

### OUR OBJECTIVES — 1934-1935

1. To secure an Advisor or a Counselor for each county and district Auxiliary and to be guided in all state activities by the Advisory Committee of the Medical Association of Georgia. Without their permission no change is to be made in the Educational program.

2. For county and district auxiliaries to file copies of their Constitutions and By-Laws with the State Auxiliary.

3. In each county to have, if feasible, chairmen corresponding to State and National Auxiliaries:—

Organization	Press and Publicity
Health Education	Historian
Public Relations	Legislation
Hygeia	Health Films

4. To contribute to the Health Film Library and provide this form of education for Auxiliaries and for the public. To contribute to the Student Educational Fund, now limited to the families of physicians of Georgia, and to send in the donation as early in the fall as possible so that the Chairman may know what amount is available for loans at the beginning of the school term.

5. To assist in the entertainment at county, district, state meetings and promote unity and friendliness through social contact. This is conceded to be one of our most important functions. It is our duty to encourage and preserve fellowship.

6. To present the health education program, outlined for us by the Medical Association of Georgia, to all lay organizations: the Medical Association of Georgia and local societies appointing the speakers, the Auxiliary supplying approved educational material. Mother Welfare, emphasizing prenatal, natal and postnatal care, reporting of births, and cancer of the breast, uterus and stomach, have been assigned us again because Georgia ranks 46 in maternal mortality and cancer is a sixth cause of death. Fifteen 3-minute talks are

available through local health education chairmen. These may be used as monthly topics or radio talks. Auxiliary members are urged to secure permission to give these talks. To read them carefully until familiar with them, a convincing speaker is a well informed speaker.

7. To accept chairmanships of health and public welfare in other organizations or any office that will advance the work of the Auxiliary.

8. To read the news letters and Auxiliary pages of the Journal of the Medical Association of Georgia. To contribute to them and send items of interest to district and State Scrap-books.

9. To re-enlist former members and to secure the membership of every eligible wife.

10. To co-operate promptly with National Auxiliary recommendations.

11. To set aside March 30th as Doctors' Day. On this day to have programs or suitable exercises honoring the men who have dedicated their services to the welfare of humanity and commemorating the deceased members of this profession.

12. To make Auxiliary success an individual project for this year. Become Auxiliary conscious. Our task is to become informed so that we can inform others. Ask organizations to have a Mother Welfare program. Every effort will mean Auxiliary growth and will assist in making a satisfactory accounting to the Medical Association of Georgia at the next convention, Atlanta, May, 1935.

MRS. J. E. PENLAND, *President*

*Dear Members and Friends of the Woman's Auxiliary,*

I am addressing you in this way, hoping that those of you who are not Auxiliary members are interested sufficiently in our work to read our pages in the medical Journal. I am expecting and hoping for a great year in our Auxiliary, but we can accom-

plish this only by interesting our women in our activities, work for an increased membership, and then with renewed strength and energy set our goal and work toward it.

President Roosevelt has, by his unprecedented legislation, lifted the American people from the slough of despondency. There is a new morale in the hearts of our citizens and a new deal is bearing fruit.

Mrs. Roosevelt has set a new standard for our women, she has been more than a helpmeet to her husband. She has gone by land, sea, and air making personal contacts, reviewing conditions and situations that she might carry the truth to our President.

Let's give the Auxiliary a new deal. With the burden of finances slipping into the background our people can grasp at other things. Let's work together to make Georgia the happiest, healthiest state in the Union.

We, as wives of physicians, have a better opportunity than the average woman, to understand the provisions of legislation affecting public health. We can perform a service to our husbands by bringing before the public such legislation as our Association may stress. We do not want to stand between our husbands and a critical public, we want to take our rightful places by their sides, and be well informed, the kind of helpmates that they need.

The Woman's Auxiliary is a veritable stepping stone to bridge the gulf between the doctor's office and a sometimes unsympathetic public. The word Auxiliary means support. Are we willing to become a real Auxiliary to our husband's profession?

Our most important work is to carry out the program that has been outlined by our Advisory Committee. We have assigned to us again this year the two pamphlets on Mother Welfare and Cancer. These two topics are so vitally important that we are not willing to disregard a single opportunity of spreading this information. In addition to this program we have fifteen splendid three-minute talks that have been written by members of the Association and the Auxiliary and approved by the Advisory Committee. Here's where you have an opportunity to help. Won't you ask your local clubs to use our health programs? This material should be given intensive study by every member of the Auxiliary in order that she may become sure in her knowledge of the subjects. We want to put over our health programs. We can do this by becoming convincing speakers and by united effort.

This material is being printed and will soon be in the hands of your District Health

Chairman for distribution. We are anxious to place it in the various organizations before the programs are planned.

"Our Objectives, 1934-35" are published in this issue of the Journal. Please read and do your part to help the Auxiliary attain its goal.

At a recent meeting of the Georgia Child Health and Welfare Council in Atlanta, a resolution was passed whereby similar councils may be formed in each county. At the request of Dr. Hines Roberts, Chairman, I have appointed a member of our Auxiliary in each county to serve on this council. You can render a great service by accepting your appointment and assisting in this worthwhile work. You will be notified by the state committee of the first meeting in the near future. All civic and patriotic organizations will be represented on these councils. Let's do our part.

We have had an opportunity again this summer of hearing some splendid lectures during the Summer Extension Courses. This invitation was extended to us through the courtesy of Emory University and University of Georgia Schools of Medicine. I hope that you are taking advantage of the ones in your city or community.

We all need to rest during these hot days and suspend our club work as much as possible, but won't you think of your Auxiliary work sometimes and begin making plans for your fall work? Some of you have District meetings that I know you will not want to miss, neither do I.

Mrs. Bashinski, Chairman of the Student Loan Fund, begs me to remind you of your pledge. She needs the money early in the fall so that she can know what amount to promise the students who apply.

With best wishes for each of you, I am,

Faithfully yours,

MRS. JOHN ERWIN PENLAND

*President Women's Auxiliary to the  
Medical Association of Georgia.*

Waycross, Ga., July 12, 1934.

#### NEWS ITEMS

Dr. and Mrs. R. L. Johnson, Waycross, entertained the members of the Ware County Medical Society in their home on July 11. The business and scientific meeting was held after dinner. Dr. W. D. Mixson read a paper on *Simple Mastoiditis*.

Staff meeting of the Walton County Hospital, Monroe, was held on July 9. Dr. D. L. Seckinger, Atlanta, spoke on the *Diagnosis and Treatment of Amebic Dysentery*. Dr. Chas. S. Floyd, Loganville; and Dr. John Gerdine, Jersey, were visitors.



Dr. R. B. Gilbert, Greenville, entertained the members of the Meriwether County Medical Society to dinner at the Greenville Hotel at a recent meeting.

Dr. Kenneth S. Hunt announces the association of Dr. George L. Walker for the practice of internal medicine. Offices at 319 South Eighth Street, Griffin.

The Chattahoochee Valley Medical and Surgical Association met at Radium Springs, Albany, July 10, 11, 12. The following doctors from Georgia were on the program to read papers: Dr. Grady E. Clay, Atlanta, paper entitled, "The Importance of Early Correction of Strabismus in School Children"; Dr. W. W. Anderson and D. F. Cathcart, Atlanta *Chest Conditions in Infants and Children*; Dr. F. G. Hodgson, Atlanta, *Management of Fractures of the Spine*; Dr. Murdock Equen, Atlanta, *Total Laryngectomy*; Dr. Geo. F. Eubanks, Atlanta, *Pruritis Ani—A Diagnostic and Therapeutic Problem*; Dr. E. G. Ballenger, Atlanta, *Management of Vesical Neck Obstruction*; Dr. Rudolph Bell, Thomasville, *Surgical Management of Renal Calculi*; Dr. E. B. Anderson, Americus, *Ureteral Calculi and Their Removal*; Dr. R. M. Joiner, Moultrie, *Uses and Abuses of Digitalis*; Dr. C. C. Aven, Atlanta, *Artificial Pneumothorax*; Dr. Champ H. Holmes, Atlanta, *Common Errors in Diagnosis of Diseases of the Lungs*; Dr. Hugh J. Bickerstaff, Columbus, *Sacral Anesthesia in Labor*; Dr. N. M. Owensby, Atlanta, "Judgment is Difficult and Experience Fallacious"; Dr. F. K. Neill, Albany, *Uterine Bleeding*; Dr. John E. Walker, Columbus, *Amebiasis as a Cause of Indigestion*; Dr. Lawson Thornton, Atlanta, *Sacro Iliac Joint Pain*; Dr. Chas. C. Harrold, Macon, *Cancer of the Breast*; Dr. Lon Grove, Atlanta, *Surgical Management of Obstructive Lesions of the Colon*; Dr. M. A. Ehrlich, Bainbridge, *Allergy*; Dr. Hal M. Davison, Atlanta, *The Most Important Allergens and Their Source of Contact with Patients*; Dr. Walter R. Holmes, Atlanta, *The Treatment of Septic Abortions*; Dr. Guy J. Dillard, Columbus, *Infectious Mononucleosis*; Dr. W. W. Young, Atlanta, *The Social Aspect of the Practice of Medicine*; Dr. Archie Griffin, Valdosta, *Pyelitis in Pregnancy*. Officers elected were as follows: Dr. Chas. C. Harrold, Macon, president; Dr. Marion T. Davidson, Birmingham, Ala., first vice-president; Dr. Matthew J. Flipse, Miami, Fla., second vice-president; Dr. W. J. Love, Opelika, Ala., reelected secretary-treasurer.

R. B. Davis Company, Hoboken, New Jersey, has just printed a 24-page booklet entitled, "Information about Cocomalt—and Suggestions for Its Use by the Medical Profession." It is illustrated and gives the percentages of increase in proteins, carbohydrates, fats, minerals, calories and vitamins when added to milk. The value of most foods are shown and illustrated. If interested, write for copy.

The First District Medical Society met at Hotel DeSoto, Savannah, July 25. The program consisted

of titles of scientific papers as follows: *Treatment of Peptic Ulcers with High Protein Diet—Case Reports*, Dr. Jno. W. Daniel, Jr., Savannah; *Acute Osteomyelitis of the Pelvic Bone—Case Reports*, Dr. C. R. Riner, Savannah; *The Unusual Necessity for Medical Organization at the Present Time*. Dr. C. L. Ayers, Toccoa, president of the Association; *Diagnosis and Treatment of Rheumatoid Arthritis*, Dr. Jas. E. Paullin, Atlanta, president-elect of the Association; *Gastric Cancer*, Dr. Jos. S. Rhame, Charleston, S. C.; *Should the Practice of Medicine Be Socialized?*, Dr. Allen H. Bunce, Atlanta, secretary-treasurer of the Association; *Obstetrical Superstition*, Dr. Joseph Akerman, University of Georgia School of Medicine, Augusta; *The Case of a Man Who Lived Thirty-Two Days with a Ruptured Thoracic Aortic Aneurism*, Dr. J. R. Broderick, Savannah; *The Premature Infant*, Dr. H. J. Morrison, Savannah; *Artificial Pneumothorax*, Dr. L. A. DeLoach, Savannah. Luncheon was served at Hotel DeSoto.

Dr. O. B. Murray, formerly of Chickamauga, announces the removal of his office to Rossville.

The Annual Conference of Secretaries of Constituent State Medical Associations will be held at the Palmer House, Chicago, September 21-22. Dr. Olin West, secretary of the American Medical Association, in the announcement states that, "Any officers of state associations who desire to be present will be cordially welcome." Dr. Allen H. Bunce, Atlanta, secretary-treasurer of the Association, will officially represent Georgia.

The Fourth District Medical Society met at Warm Springs, August 1. Titles of papers on the scientific program were as follows: *Acute Gout*, Dr. W. W. Blackman, Atlanta; *Rabies*, Dr. E. G. Kirby, Bowdon; *Morphine Poisoning*, Dr. T. Neal Kitchens, Warm Springs; *Zinc Oxide Cast for Second and Third Degree Burns*, Dr. J. G. Smith, McDonough; "Address," Dr. C. L. Ayers, Toccoa, president of the Association; "Address," Dr. Jas. E. Paullin, Atlanta, president-elect of the Association; scientific paper by Dr. C. E. Irwin, Warm Springs. Dinner was served in the dining room of Georgia Hall.

The American Congress of Physical Therapy will hold its Annual Scientific and Clinical Session at Bellevue Stratford, Philadelphia, Sept. 10-13, 1934. Dr. LeRoy W. Hubbard, Warm Springs, will read a paper entitled, *Anterior Poliomyelitis—Moving Picture Illustration*.

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, August 2. Dr. H. J. Rosenberg reported a case, *Glossodynia*; Dr. Lewis M. Gaines made a clinical talk, *Heart Symptoms Without Heart Disease*; Dr. Stacy C. Howell read a paper entitled, *The Action of Epinephrin on the Normal Human Eye*. Discussions were led by Dr. Grady E. Clay, Dr. Hal M. Davison and Dr. W. O. Martin, Jr.

Dr. R. Hugh Wood announces the removal of his office to the Doctors' Building, 478 Peachtree Street, N.E., Atlanta.

Excellent location for a physician in a small south Georgia town. The village has water and light systems. If interested write to the secretary-treasurer.

The Randolph County Medical Society met at the Patterson Hospital, Cuthbert, on August 2. Dr. T. F. Harper, Coleman, read a paper entitled, *Undulant Fever*.

Members of the Decatur-Seminole Counties Medical Society were entertained in the home of Dr. and Mrs. M. A. Fort, Bainbridge, on July 27. Dr. R. F. Wheat and Dr. M. A. Ehrlich, Bainbridge, read scientific papers.

Dr. J. E. Lester, Marietta, Cobb County Commissioner of Health, vaccinated more than 1500 people against typhoid fever during the week of July 23. The preventative treatments will be continued at proper intervals until all immunizing treatments have been given.

The Burke-Jenkins-Screven Counties Medical Societies met at Millen on August 2. Dr. H. G. Lee, Millen, read a paper entitled *A Study of Diseases of the Endocardium*; Dr. Cleveland Thompson, Millen, reported a case of *Arachnoidism* and two cases of the *Black Widow Spider Bites*. Visiting doctors were: Dr. B. T. Beasley, Atlanta, and Dr. Ralph Mosteller, Augusta. A dutch dinner was served.

The Ware County Medical Society met at the Y. M. C. A. Building, Waycross, August 1. Dr. Paul Eaton, Jacksonville, Fla., spoke on "Laboratory Work and Public Health."

The Tenth District Medical Society met at Washington on August 8. Titles of scientific papers on the program were as follows: *Cardiovascular Syphilis*, Dr. John W. Brittingham, Augusta; *Congenital Syphilis*, Dr. R. C. McGahee, Augusta; *Breast Lesions*, Dr. Wm. Perrin Nicholson, Atlanta; *Medical Care of Cataracts*, Dr. J. M. Hull, Augusta; *Gastric Neuroses*, Dr. W. J. Cranston, Augusta; Address by Dr. Linton Gerdine, Athens, President of the Society; Address by Dr. Clarence L. Ayers, President of the Association. Motion carried for the society which may be host to the district society at its semi-annual meetings to bear all the expenses of entertainment, also that the secretary-treasurer of each county society in the district shall collect fifty cents as annual dues for the district society from each member. A barbecue dinner was served in the School Auditorium at 1:00 p.m.

Dr. L. Sage Hardin, Atlanta, was honored at a surprise birthday party at the Georgia Baptist Hospital

on August 1st. A feature of the party was the formal opening of a refinished and refurnished room with a bronze tablet on the door commemorating the event. Funds were contributed by his admirers, friends and patients. During the reception many associates in the medical profession, members of the hospital staff, patients and others called to extend good wishes to Dr. and Mrs. Hardin.

Dr. W. C. Hafford, Waycross, will entertain the members of the Ware County Medical Society on September 5th. Dr. J. E. Penland, Waycross, will deliver an address on a professional subject which will be announced later.

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, August 16th. Dr. Geo. F. Eubanks gave a case report entitled, *Multiple Polyposis of the Sigmoid*; Dr. Edwin S. Byrd made a clinical talk on *Progressive Pernicious Anemia*; Dr. Calvin Stewart and Dr. John F. Denton, paper and report of cases, *Carcinoma of the Cervix Uteri; End Results in 333 Cases*. Dr. Floyd W. McRae, Dr. O. D. Hall and Dr. W. F. Shallenberger led the discussions.

The Jackson-Barrow Counties Medical Society met at the Winder Hotel, Winder, on August 6th. Dr. F. M. Hubbard, Dr. A. A. Rogers, Dr. Paul Scoggins and Dr. Laetus Sanders, all of Commerce, attended the meeting.

The second inscription for a member of the Medical Association of Georgia to be engraved on the L. G. Hardman Silver Loving Cup is as follows:

"Doctor James Augustus Redfearn.

Albany, Georgia

for leadership in the first county-wide malaria control. Eighty-Fifth Annual Session of the Medical Association of Georgia, May 8-11, 1934  
Augusta, Georgia."

#### OBITUARY

Dr. John Calhoun Griffies, Burwell (Carrollton); member; Atlanta College of Physicians and Surgeons, 1890; aged 74; died at his home on July 26, 1934. He was born and reared in Carroll county. Dr. Griffies was a practicing physician and leading citizen for more than forty years. He was active in the interest of everything for the improvement of his community. Dr. Griffies was a member of the Methodist church. His Sunday School class numbered more than one hundred. For many years he was chairman of the Board of Stewards of the Methodist Church. Surviving him are his widow, three sons, H. W. Griffies, Mt. Zion; Rev. J. A. Griffies, Tignall, and Jesse Griffies, Bowdon; two daughters, Mrs. Alma Wright and Mrs. Annie Ruth Musick, both of Bowdon. Funeral services were conducted by Rev. Zach Hayes and Rev. W. J. Lovvorn from Shiloh church. Interment was in the churchyard.



*Dr. Hamlin Collier Cook*, Cedartown; Georgia College Eclectic Medicine and Surgery, Atlanta, 1888; aged 75; died at his home after an illness of short duration on July 4, 1934. He was born and reared in Atlanta, where he began the practice of medicine. Later Dr. Cook practiced at Temple, Bremen and Cedartown. He had many friends and held the esteem of all who knew him. Dr. Cook possessed a strong personality and charitable disposition. Surviving him are his widow, one son, David Cook, Atlanta, and one daughter, Miss Florine Cook, Cedartown. Funeral services were conducted from the Bremen Methodist church by Rev. M. R. Chambers. Burial was in the Bremen cemetery.

*Dr. Harvard Smith*, Smithville; University of Georgia School of Medicine, Augusta, 1893; aged 74; died at his residence on July 12, 1934. He was born and reared near Smithville and lived there almost his entire life. For many years he did an extensive practice in Sumter and Lee counties. Dr. Smith was a successful practitioner and held in high esteem by hundreds of friends. He was a member of the Woodmen of the World and the Smithville Methodist Church. Surviving him are his widow and one son, P. B. Smith, Jacksonville, Fla. Funeral services were conducted from the residence by Rev. Charles Jackson.

## WHAT EVERY DOCTOR SHOULD KNOW ABOUT RABIES

(Continued from page 324)

*Rule 7. All Dogs and Cats Bitten or Suspected of Having Been Bitten by a Rabid Dog Should Be Killed at Once.*

It is practically certain that every animal bitten by a rabid dog will go mad unless it is treated or killed. It will develop the disease usually within three or four weeks but may develop it any time within *three months* from the date it was bitten. The owner who knows or suspects that his dog has been bitten by a rabid dog and who fails to kill it or keep it securely confined day and night for not less than three months, is subjecting his own family and his neighbor's to a serious menace. At least one state has passed the following law:

"If the owner of any dog shall know, or have good reason to believe, that his dog, or any dog belonging to any person under his control, has been bitten by a mad dog, and shall neglect or refuse immediately to kill the same, he shall forfeit and pay the sum of fifty dollars to him who will sue therefor; and the offender shall be liable to pay all damages which may be sustained by anyone, in his property or person, by the bite of any such dog, and shall be guilty of a misdemeanor, and fined not more than fifty

dollars or imprisoned not more than thirty days."

Such a law is badly needed in Georgia.

## SUMMER DIARRHEA IN BABIES

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## INFANTILE SPINAL PARALYSIS CURED

(Continued from Page 319)

find if given in the muscles of the arm, a swollen and very red and painful arm, but do not worry, just bathe the arm with spirits of camphor and give patient five grains acetyl salicylic acid followed by a glass of water every two hours until fever cools and pain is relieved. This treatment is for *acute cases* and should be used at once when the case is first diagnosed. In all cases of sudden and repeated vomiting with or without convulsions and fever 103 to 105 that cannot be accounted for, look for signs of infantile paralysis.

Hoping this may be the means of saving thousands of born and millions of unborn children from lives of helplessness and suffering I am giving the treatment to the world in the name and for the sake of humanity.

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## NEPHROSIS IN CHILDHOOD\*

A. J. WARING, M.D.  
*Savannah*

For many years the nephropathies have intrigued the best minds in the field of medicine. I think this is not only due to the importance of the subject but also to the constant challenge its perplexities furnish the dietitian, the biochemist, the pathologist, and the Simon-pure clinician. Frederick Von Muller in 1905 possibly initiated a struggle sometimes brilliant and sometimes quite illogical by classifying one of the nephritides as nephrosis. From the pathological standpoint he was endeavoring to separate a tubular degeneration of the kidneys from the ordinary inflammatory type of kidney lesion or nephritis. Little has been added to his original pathological observations but much conflict has been waged in laboratory and literature over the name he applied to a now well-known symptom-complex, and over its possible etiology, and over the explanation of its major symptoms. Muller called it 'nephrosis'; Munk, "lipoid nephrosis"; Epstein, "diabetes albuminuricus"; Christian, "subacute nephritis" with oedema; Blackfan, "acute tubular nephritis"; and K. Lowenthal suggests the term "diabetes lipoido-proteinicus." Nevertheless for routine purposes and possibly because of its brevity Muller's term nephrosis still holds the major position in the average medical mind.

SYMPTOMS: Quite classical and now well recognized:

- (a) *Oedema*: Usually the first symptom and insidious in its approach. The patient often brought to the doctor because of pallor and puffiness.
- (b) *Urinary Changes*: Albuminuria, marked and constant. Sometimes casts are present in the urine,

sometimes none. There is a notable absence of cellular elements, particularly erythrocytes; oliguria a significant feature. Doubly refractile lipoid bodies are described by Munk.

- (c) *Blood Changes*: Lipoidemia—marked increase in blood lipoids, particularly cholesterol; a reversal of the usual albumin-globulin ratio of two to one with general low protein content. Anemia may be marked as is evident in my concluding case report.
- (d) *Basal Metabolism*: Often low though there is apparently no change in the secretory activity of the thyroid gland. Probably due to disturbed cellular metabolism without compensatory activity on the part of the thyroid gland—an apparent hypothyroidism (Epstein).
- (e) *Fatigability*: A natural and constant present symptom.

As opposed to the symptomatology of a glomerular nephritis in childhood it is well to note in nephrosis the usually normal N. P.N. determination, normal blood pressure reading, absence of hematuria, often normal P.S.P. function test and the absence of uremic symptoms. It is quite questionable, however, whether pure nephrosis is anything but a "rara avis". The nephrotic syndrome may precede, follow, or be associated with the symptoms of a typical glomerular nephritis.

*Etiological Factors In Nephrosis*: Although medical literature contains many reported cases of nephrosis in adult life (Conrad, C. E.<sup>1</sup>—Van Caulaert, C.—Schwob, M.—Trautmann, M.<sup>2</sup>—Kantrovitz, A. R.—Klemperer, P.<sup>2</sup>—Holmes, W. H.<sup>4</sup> etc.) nevertheless the more nearly perfect type occurs largely in childhood. One therefore appreciates the greater importance of reports appearing in pediatric literature. Strictly speaking, no bacterial factor has been definitely demonstrated. Claussen and Marriott have found a staphylococcus infection of the sinuses a possible common causative factor. Some observers felt that diphtheria as a precursor de-

\*Read before the Medical Association of Georgia, Augusta, May, 9, 1934.

served serious consideration, but animal experimentation proved fruitless. It is to be noted that the disease not infrequently occurs after the infectious diseases and proceeds in a chronic course with remissions dependent somewhat upon concomitant infections. Nevertheless hardly any child of five years has failed to have a few infectious diseases and cases of nephrosis are reported of subtle and obscure origin and with spontaneous recovery. I believe it fair to state that at the present writing bacterial factors are unknown or questionable.

*Metabolic and Endocrine Factors:* Epstein is of course the outstanding champion of this point of view, rather well supported in most medical centers in this country and in England, by German investigators, and not at all by the French. Epstein stresses the obscure etiology, the significant manner in which all its symptoms differ from those of the usual acute nephritis, the lipoidemia, the reverse albumin-globulin ratio, the lowered basal metabolism with often the accompanying beneficent effect of thyroid medication. On the other hand, H. A. Christian<sup>50</sup> claims that in his clinic Barker and Kirk "have produced in dogs by repeated bleeding, with return of the washed blood corpuscles to prevent anemia, oedema, lowered basal metabolic rate, decreased blood protein with reversal of the albumin to globulin ratio, and increased blood lipoids." Many observers agree that this symptom-complex is largely due to the albuminuria and the accompanying protein loss. The albuminuria is considered the result of a physico-chemical rather than a pathological change in the glomerular membrane, permitting a leakage of serum protein. This is undoubtedly an ingenious but unsubstantiated theory. Epstein<sup>7</sup> feels that the albuminuria is due to some fundamental error in metabolism as the result of which the non-utilized protein is excreted by the kidneys, resembling the manner in which non-oxidized carbohydrate is disposed of in the urine in diabetes mellitus. He, therefore, uses a descriptive term "Diabetes Albuminuricus." This also is a most ingenious but thus far unsubstantiated theory. K. Lowenthal<sup>89</sup> eight or ten years ago pointed out the fact that in herbivorous animals hypercholester-

inemia could be produced by cholesterol feeding and that he was able to demonstrate as a result of cholesterol feeding in rabbits "a condition which should be considered symptomalogically and anatomically similar to lipoid nephrosis." It is quite interesting in this connection that recent study by Westcott and Dennett<sup>10</sup> urges these observers to the conclusion that the oedema is not entirely related to the rise and fall of blood protein but follows more closely a changed lecithin-cholesterol ratio.

*Prognosis:* Usually not good; death occurs as the direct or indirect result of repeated infections. The ascitic abdomen is an excellent culture medium and not a few nephrotics die of peritonitis. Some cases spontaneously recover. Aldrich describes one of his cases located with difficulty after the passage of several years. This child was clinically well and a champion swimmer in her school district. On the other hand, Mackay and Johnston<sup>11</sup> describe a case that pursued a remorseless course for seventeen years with death finally ensuing from a streptococcic peritonitis.

*Treatment:* Will be discussed very briefly.

1. *Dietetic Therapy:* Epstein's dietary contributions have been somewhat revolutionary and of genuine value clinically. Because of the uniformly low blood protein he practices high protein feeding, low fat, and moderate carbohydrate diet. Salt is restricted, if not eliminated. Water somewhat restricted but not to the patient's discomfort. It may confuse the dietetic picture somewhat but Schiff, E.,<sup>12</sup> contends that the lipoidemia indicates that part of the fat consumed cannot be utilized. Therefore instead of feeding a low fat a la Epstein he prescribes a high fat a la Schiff and claims his results are excellent. In the last analysis it seems to me most important to realize that a balanced diet being of primary value to the healthy individual is doubly valuable to the chronically sick individual, no matter what his illness may be. A reasonably balanced diet with abundant vitamin content is, therefore, essential even in the case of an oedematous patient. Diuretics are of little value. Urea is sometimes quite helpful but constitutes a nauseating dose. In this connection the stud-



ies of Czoniczer and Weber<sup>13</sup> revealed the interesting fact that though a high protein diet did increase albuminuria, nevertheless at the same time it increased diuresis. They believe this diuresis was the direct result of urea produced from high protein feeding. Their charts showed on certain patients alternately fed urea and increased protein, the same effect of each upon oedema and diuresis. For physiological reasons, the high protein was less rapid in its action.

2. *Glandular Therapy*: Insulin, parathyroid gland, thyroxin and thyroid gland have all been tried. Thyroxin and thyroid gland<sup>14</sup> have at times proved startlingly effective in promoting diuresis and relieving oedema.

3. *Intravenous Therapy*: Lastly the intravenous use of protein deserves serious mention. Repeated small transfusions have proved markedly beneficial. Hartmann<sup>15</sup> and Marriott claim excellent results with the intravenous use of acacia.

For much symptomatic and experimental treatment I have no further space in this brief paper. I append the following case report.

CASE 1.—J. M. (male) *Previous History*. (Irrelevant details omitted.) Taken in charge by excellent stepmother when 3 years old; apparently well but very white and abdomen large. No history of infectious diseases obtained. Apparently developed pertussis in April, 1932. While receiving vaccine therapy, stepmother noticed an increasing general swelling and puffiness. Urine showed marked albuminuria. For eight months in and out of hospital with little or no improvement. Several paracenteses. First seen at home February 10, 1933. Small boy, bed ridden, intensely anaemic and generally dropsical. Mental condition bright and cheerful. Taken to hospital. *Examination*: Weight 38 pounds. Wassermann, malarial, Mantoux tests negative. X-ray sinuses and chest negative. Intestinal parasites negative. Blood serum milky, hemoglobin 35 per cent. *Urine*: 24 hours output 300 to 450 cc. Casts few—albumin, heavy cloud—cellular elements none. *Hospital course*: 3 transfusions at 48 hours intervals, 120 to 250 cc. produced definitely good results. Hemoglobin rose from 25 to 45 per cent. Urinary output without increase in fluid intake (about 600 cc.) rose from 300 cc. to 1200 cc. Epstein type of diet employed; no diuretics. *General progress*: N.P.N. determination varies 40 to 48 mgm. per 100 cc. Cholesterol determination (recent) 220 mgm. per 100 cc. PSP function test, 10 to 25 per cent. Body weight at present 42 1-2 pounds. Blood pressure 100/75. Urine always shows marked album-

inuria. Fluid intake 900 to 1200 cc. Urinary output 800 to 1000 cc. Hemoglobin 20 to 45 per cent. Always steadily falls until transfusion given. Has averaged about one transfusion 250 to 350 cc. per month. Except for scattered colds has been well and cheerful. Always quite pale, abdomen large; slight pitting on pressure over tibia; steadily up and about; plays well; is fairly active, but easily fatigued. In November, 1933, suddenly developed typical tetany with carpopedal spasm. At this time on a well-balanced diet and receiving cod liver oil and yeast. Tetany promptly relieved by calcium gluconate; no parathyroid therapy. For four months has received 1 to 2 grains of thyroid gland daily with marked benefit to oedema and general well-being. When given more than 2 grains of thyroid daily becomes irritable and tremulous; still receives 8 to 15 grains of calcium gluconate daily.

#### Case

Certain interesting phenomena.

1. General well-being. As a rule cheerful, bright, and wants to be active.
2. Attacks of tetany. Rare in nephrosis.
3. Without the aid of a transfusion a progressively increasing anaemia no matter what is done in the way of diet, iron, and liver extract.
4. With no change in fluid intake the phenomenal effect of transfusions on urinary output. After transfusions the urinary output will almost double for 2 or 3 days.
5. The favorable effect of thyroid in small dosage.

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#### Discussion on Paper by Dr. A. J. Waring

DR. R. C. MCGAHEE (Augusta): The diagnosis of nephrosis is not always an easy one to make. At times only after prolonged and careful observation can one be sure. This is especially true in distinguishing it from chronic active glomerular nephritis with the nephrotic syndrome. Leiter<sup>1</sup> in his monograph on nephrosis says, "the nephrotic type of glomerulonephritis can mimic, down to the last detail, the entire clinical complex of the signs and symptoms of nephro-

sis. There is not a single exception to this in the positive findings." In both syndromes there is much edema, marked albuminuria, increased cholesterol in the blood, reduced plasma protein and a reversal of the albumin-globulin ratio. In addition, however, in chronic active glomerular nephritis or chronic non-specific nephritis of Aldrich with the nephrotic syndrome one should expect to observe also arterial hypertension, hematuria, elevated non-protein nitrogen, lowered renal function and a greater tendency toward anemia. However, Alrich<sup>2</sup> in his excellent clinical report on forty cases of chronic non-specific nephritis did not always find hypertension, hematuria and elevated non-protein nitrogen in the blood. Thus one sees that the most reliable points of differentiation at times fail to make the diagnosis clear. This is why prolonged, repeated and careful observation is necessary before one can say with certainty that this patient has nephrosis and does not have chronic glomerular nephritis. On the other hand if one finds hematuria, arterial hypertension, increased non-protein nitrogen and reduced kidney function he can safely say the patient does not have nephrosis.

The prognosis in the two conditions is vastly different. In chronic active glomerular nephritis the mortality is ultimately very high. Aldrich<sup>3</sup> reported 54.2 per cent of such patients dead and the others clinically ill. Of his nephrosis cases he reported 40 per cent recovered or convalescent, 25 per cent clinically ill but 80 per cent of these showed only marked albuminuria; thirty-five per cent were dead.

Thus it is a matter of considerable importance from the standpoint of prognosis to know whether one is dealing with one syndrome or the other. I venture to say that the Addis method of detecting low grade hematuria by concentrating the urine through dehydration and quantitatively determining the number of red blood cells present by means of the blood counting chamber and second the urea clearance test for renal function will be of aid to differential diagnosis in the future.

I should like to mention one point concerning the treatment of this disease that Dr. Waring did not have time to dwell upon, and that is the importance of controlling edema. Hartmann et al<sup>4</sup> state that approximately one-half of the total number of severe cases nephrosis developed fatal peritonitis. Schwarz and Kohn<sup>5</sup> found a bacteremia in six out of nine cases of nephrosis studied. May not the peritonitis develop secondary to ascites, the ascitic fluid carrying the organisms from the blood stream with it in to the peritoneal cavity? The control of edema suggests itself as a means of prevention of peritonitis. Edema however at times is exceedingly hard to prevent or relieve and may be present in spite of high protein feeding, diuretics, blood transfusions and water and salt restriction. Hartmann and his associates have used acacia with a remarkable degree of success not only in controlling edema but they report improvement of the renal lesion with disappearance of casts and diminution of albuminuria permitting the plasma protein to rise

above the edema zone. These workers stress the importance of giving sufficient amounts of acacia to raise the colloidal osmotic pressure above the edema level. At times this requires as much as a 6 per cent acacia content in the blood plasma. They suggest giving one gram of acacia per kilogram body weight intravenously and repeating it one or more times at daily intervals unless diuresis is established. Their results with this form of treatment together with of course the other recognized methods of therapy are encouraging.

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DR. WILLIAM L. FUNKHOUSER (Atlanta): I think it is difficult to say when a nephritis is a nephrosis or when a nephrosis becomes a nephritis. Of course if we have a history of recurrent edema, with a urine loaded with albumin, with no cast, with probably an occasional blood cell, hypercholesterol, normal blood pressure, and a reversal of the serum albumin-globulin ratio, we, for practical purposes, have a nephrosis. The treatment is very unsatisfactory.

The greatest advance we have made in the treatment of nephrosis is that we do not treat as a nephritis, but care for the physical condition of the patient. The limiting of fluids and the reduction of salt in the diet has little or no effect. Edema comes and goes in spite of what we do. Apparently the administration of thyroid extract sometimes gives relief, but is disappointing. Some years ago I reported a series of cases of edema associated with cardiac decompensation in children, with the use of Salyrgan, and obtained beautiful results; the urinary output increased; weight, of course, decreased, and edema disappeared. I was anxious to use Salyrgan in nephrosis, and while it did no damage to the kidney there was no increase in the urinary output and no reduction in the edema. A failure to get results was, of course, due to the fact that in nephrosis we do not have the salt retention, but a loss of protein. For that reason we feel that the high protein diet ought to give results. I think we should take these little patients realizing that we have to look after them physically, give them a high protein diet, and hope they will not have a recurrent infection.

DR. A. J. WARING (Closing): I desire to mention just one or two things in conclusion. I dismissed the diuretic treatment with one sentence in the paper, but there are different drugs we can use in a diuretic way. We have caffeine, diuretin, and theosin, and we have the different salts that can be used, ammonium chloride, ammonium sulphate, ammonium nitrate, (used a great deal with excellent results, starting with 1 to 2 grams a day and going up to 5 to 10 grams a day until the results hoped for are obtained.) This program is not continued for more than four or five days. Helmholtz usually alternates this treatment with



the mercurial compounds of Salyrgan and Merbaphen in doses of 0.2 cc. to 1 cc. intramuscularly once or twice a week, and never over a month.

The use of urea is nauseating to the adult, and particularly nauseating to a child. Practically speaking, although excellent results have been reported at times from its use, from the standpoint of children it is almost impossible to administer.

Finally there are two things that stand out in my mind. I realize that this paper dipped a little into the field of biochemistry, but two things I wish to emphasize. Firstly, twenty to twenty-five years ago it was perfectly possible for a doctor to be a good clinician with scant biochemical knowledge, but that day is past, and secondly, if you get in your practice a chronically dropsical child, think about etiological factors a little before you start treatment.

## FOCI OF INFECTION IN ALLERGIC REACTIONS OF CHILDREN: THEIR RELATIVE UNIMPORTANCE\*

LEE BIVINGS, M.D.  
*Atlanta*

There seems to exist in the minds of many physicians the impression that foci of infection, especially sinus infection, are frequent causes of such symptoms as asthma, hay fever and eczema.

Nasopharyngeal infection is particularly prone to occur in the asthmatic because of chronic congestion and faulty drainage in the nose but it would seem that such a condition is much more likely to occur secondarily in the asthmas of children. There is little doubt that on rare occasions such foci are the only etiological factors in allergic reactions of children.

It is the purpose of this paper to call attention to the rarity but to show that bacterial sensitization does occur and to show how it differs from sensitizations to such substances as foods and the inhalants (pollens, feathers, epidermals, etc.).

Asthmatic bronchitis differs from true asthma in the following ways:

(a) There is usually a negative family history of allergy.

(b) Attacks usually occur during the winter months only and are accompanied by fever with coughing as a more pronounced symptom.

(c) Attacks may persist for months without intermission while those of the true asthmatic are usually intermittent.

(d) There is usually an associated or preceding nasopharyngeal infection.

(e) There is not usually an increase in the eosinophile count.

(f) The general health of the individual is more likely to be affected than in true asthma of children.

The following case reports bring out some of the important facts concerning bacterial sensitization.

CASE 1.—G. C., age 4 years. Negative family history of allergy. Chief complaint is chronic cough, frequent colds with high fever and convulsions. Diagnosis, asthmatic bronchitis.

*Symptoms*—profuse nasopharyngeal infection, inspiratory wheezing and coughing. Symptoms have persisted for twelve months and worse during the winter.

*Laboratory*—Eosinophilia 4 per cent.

*Treatment*—Autogenous vaccine and nasal shrinkage.

*Results*—Excellent, attacks controlled to an occasional mild attack with wheezing although the nasopharyngeal infection has not cleared entirely to date. Has gained five pounds in two months.

CASE 2.—J. F., age 4 years, female. Negative family history of allergy. Chief complaint is chronic cough with occasional wheezing and fever.

*Symptoms*—Profuse nasopharyngeal infection, fever with attacks, inspiratory wheezing. Duration, three months.

*Diagnosis*—Asthmatic Bronchitis.

*Treatment*—Autogenous vaccine and nasal shrinkage.

*Results*—Condition improves during period of vaccine therapy to recur if vaccine is discontinued.

CASE 3.—E. D., age 1 year, female. Negative family history of allergy. Chief complaint is chronic cough and wheezing.

*Symptoms*—Chronic coryza, high fever and acute attacks of coughing and inspiratory wheezing. Duration, nine months.

*Laboratory*—No eosinophilia.

*Diagnosis*—Asthmatic Bronchitis.

*Treatment*—Autogenous vaccine and nasal shrinkage.

*Results*—Excellent, attacks ceased entirely in six weeks, gained six pounds in four months.

CASE 4.—G. N., age 3 years, female. Negative family history of allergy. Chief complain, severe itching and generalized skin eruption.

*Symptoms*—Generalized maculopapular eruption, urinary frequency, high fever. Duration 3 days.

*Laboratory*—No eosinophiles.

*Diagnosis*—Urticaria.

*Treatment*—Urinary antiseptics. Adrenalin.

*Results*—Urticaria did not clear until pyuria cleared.

CASE 5.—M. B., age 9 years, female. Negative family history of allergy. Chief complaint, itching with generalized eruption.

\*Read before the Medical Association of Georgia, Augusta, May, 9, 1934.

*Symptoms*—High fever, acute sore throat, joint pains and swelling generalized maculopapular eruption with edema around the eyes. Duration, 7 days.

*Laboratory*—No eosinophilia. Throat culture showed the presence of diphtheria on one culture but absent on the next, also streptococci. Intradermal test strongly positive to streptococci.

*Treatment*—Adrenalin, ephedrin and amytal, aspirin and throat antiseptics.

*Results*—Urticaria did not clear until the throat cleared.

CASE 6.—G. M., age 14 years, male. Negative family history of allergy. Chief complaint, asthma.

*Symptoms*—Asthma, hay fever, acute nasopharyngeal infection. Duration of symptoms, ten years.

*Laboratory*—Eosinophilia, strongly sensitive to ragweed pollen and dog epithelium. Positive intradermal to culture of nasopharyngeal infection.

*Diagnosis*—Asthma and hay fever.

*Treatment*—Ragweed desensitization and autogenous vaccine.

*Results*—Ragweed desensitization successful but nasopharyngeal infection not checked during winter with subsequent asthmatic attacks.

CASE 7.—M. J., age 14 years, female. Negative family history of allergy. Chief complaint, coughing, shortness of breath and skin eruption.

*Symptoms*—Profuse nasopharyngeal infection, severe dyspnoea, expiratory wheezing, dry scaly dermatitis of scalp, face, shoulders and arms. Duration, 6 weeks—one attack three years ago and none since until the present illness.

*Laboratory*—Eosinophilia, negative skin tests to all foods and inhalants, positive patch test to two flowers.

*Diagnosis*—Asthma and eczema.

*Treatment*—Relief of immediate attacks with ephedrin and adrenalin, autogenous vaccine.

*Results*—Gained twenty pounds in one year, asthma gradually subsided, eczema was apparently not affected by vaccine but cleared spontaneously after flowering season was over.

CASE 8.—B. H., age 6 1-2 years, male. Positive family history of allergy. Chief complaint, eruption on face, shoulders, neck and genitals.

*Symptoms*—Severe itching, vesiculo-pustular eruption. Duration, nine months, appeared following three months of streptococcic sore throat.

*Laboratory*—Culture of throat showed streptococci present in pure culture. Smear of unruptured vesicle showed 17 per cent eosinophiles, blood smear showed 8 per cent.

*Treatment*—Autogenous vaccine.

*Results*—Immediate improvement, clear in 6 weeks.

CASE 9.—B. M., age 4 years, male. Positive family history of allergy. Chief complaint, eczema.

*Symptoms*—Dry scaly eruption on face and arms. Duration, 3 months since attack of acute otitis media but had appeared three successive winters beginning with a throat infection. Always cleared with the onset of hot weather.

*Laboratory*—Eosinophilia.

*Treatment*—Directed at infection in throat until the last year when it persisted into warm weather when he was found sensitive to milk, eggs and wheat. Cleared on elimination from the diet.

*Results*—Has remained clear for three years.

### Summary

Three cases of asthmatic bronchitis have been presented which differed in many ways from true asthma.

Two cases of asthma have been presented in which foci of infection play important parts in etiology.

Two cases of urticaria have been presented whose etiology seemed to have been foci of infection.

Two cases of eczema have been presented in which foci of infection seemed to play important parts in etiology.

Thus a total of nine cases have been presented in which foci of infection play the sole or most important part in etiology.

These cases appeared in the course of study of 303 allergic children. An incidence of approximately three per cent.

### Conclusion

It would seem that foci of infection play a relatively unimportant part in the etiology of allergic reactions in children.

### Discussion on Paper by Dr. Lee Bivings

DR. HAL M. DAVISON (Atlanta): It is hard to draw conclusions about the relations between allergic disturbances and infection. We see a large number of cases of hay fever, some with symptoms lasting from early spring until late fall, and seldom if ever does acute sinus disease occur in these cases. If the patients do not react well to treatment, the nose will not drain well for the entire season. In other cases there seems to be a direct relationship between infection in the upper respiratory tract and a secondary bronchitis or asthma.

The actual role that bacteria and infection play in the production of allergic manifestations has not been proven, and therefore, has not been settled. There are three schools of thought, or rather, of opinion, about the matter. Some allergists claim that allergic individuals are never sensitive to bacteria. Others say that sensitization does occur and that it may be demonstrated by skin tests with the production of the typical allergic reaction, e. g. wheal formation with pseudopod-like projections, redness and itching. Still others show by actual experiment that individuals with allergic manifestations such as asthma, urticaria or eczema, will give a reaction to the intradermal injection of certain bacteria grown from the sputum or from



some focus of infection, and not to the injection of other bacteria from the same source. This reaction consists of swelling, redness, and heat.

Piness of Los Angeles claims that bacteria and infection are never actual causes of sensitization. Cook of New York, formerly held the same view, but has changed his opinion. Brown of Washington is a strong advocate of the second idea, and Thomas of New York of the third. Most allergists believe that patients may be sensitive to bacteria, but like Dr. Bivings, I believe that this sensitization occurs rarely. No doubt, infection with or without accompanying fever, often acts as a precipitating cause of allergic attacks, especially asthma.

We have obtained definite reactions to various killed bacteria, and use the scratch test, but have seldom, if ever, obtained specific results from treatment with these bacteria. On the other hand, patients suffering from asthma, urticaria and eczema, often improve after treatment with either autogenous vaccine or with a stock vaccine, especially after large doses of streptococcic vaccine. Koch of London, has long advocated treatment of these diseases with a vaccine composed of all bacteria grown from a culture of the feces of the patient, and gives this vaccine both by mouth and by hypodermic injection. We have used this vaccine with good results in some cases, especially those of skin manifestations. The subcutaneous or intravenous injection of 5 per cent Peptone solution often gives relief from the above diseases. For these reasons we believe that at present we must place vaccine therapy in allergic diseases in the category of non-specific protein therapy unless the patient actually gives a typical allergic reaction to skin tests with the vaccine.

I believe that is a fair conclusion.

Sinus infection in children differs materially from sinus infection in adults. In adults we often find cases of asthma that cannot be relieved by any known treatment until nasal polypi are removed and infected sinuses treated. And in some cases of asthma with pansinusitis, no other cause for asthma is ever found and the asthma is never relieved.

We have had five such cases in the last two years.

In children sinus infection occurs less frequently and plays a relative minor part in the production of allergic diseases as Dr. Bivings has so clearly shown.

Many younger children and infants present wheezing rales with ordinary bronchitis, but if this bronchitis tends to recur, and if the rales increase to the point of wheezing, we believe that this patient should be tested for sensitization and that sensitization will be found in a large percentage of the cases. We often find asthmatic cases in later life who give the history of a long continued asthmatic-bronchitis during childhood.

The number of very young children that we see is relatively small, but we find a good many of these cases with a history of having had an asthmatic bronchitis in early childhood, and after they reach the age

of 12 to 18 years, they develop definite asthmatic attacks. We believe that if they had been tested and treated at the beginning of their symptoms, they might have been given quicker relief. Asthmatic attacks per se seldom cause fever, but asthma accompanied by bronchitis or coryza often produces fever.

We agree with Dr. Bivings that foci of infection in children are of relatively little importance in causing allergic manifestations. As to the actual role that bacteria and infections play in the production of these manifestations, we feel that by the method used at present, it is extremely difficult to determine when an infection or bacteria is an actual cause, or is simply a precipitating cause of allergic disease.

DR. LEE BIVINGS (Closing): I thank Dr. Davison for his discussion, and thoroughly agree with him that infection often is a precipitating cause in attacks of asthma, but I think we should go very slowly in coming to the conclusion, without absolute proof, that it is the actual cause of asthma.

I wish to mention four cases of urticaria that I have seen, two of this series I reported here developed urticaria from autogenous vaccine and two cases developed urticaria from whooping cough vaccine. When such symptoms of allergy do occur, one can hardly get away from the fact that there must be a bacterial sensitivity present. It is a relatively rare thing that it occurs in children, and one should go very slowly before ascribing the cause of any symptoms that I mentioned to bacterial sensitization.

#### NORMAL SLEEP PATTERN FOR CHILDREN: FACTORS WHICH DERANGE SUCH A PATTERN (PHYSICAL FACTORS)

Glennville Giddings, Atlanta, Ga. (Journal A. M. A., February 17, 1934), draws the following conclusions from a study of the sleep of twenty-eight children, aged from 9 to 14 years, equally divided as to sex, over a period of 364 nights. 1. A child has a definite sleep pattern. This pattern is rarely disturbed except through sickness or certain experimental conditions. 2. The drinking of 6 ounces of warm milk at bed-time seems to produce quiet sleep in normal children. Of the other beverages tested, none seems to affect sleep consistently, one way or the other. The drinking of a beverage containing three-fifth grain (0.04 Gm.) of caffeine produces no more restlessness than was seen after the drinking of an equal amount of orange juice. 3. The taking of a large amount of food at the evening meal, even though the food might be considered plain food, resulted in marked restlessness. In many cases the restlessness continued throughout the night. 4. The giving of baths, either warm or cold, on retiring seems to have no constant effect, either in the production of, or in the interference with sleep in normal children. 5. A child sleeps definitely quieter in cold weather than in hot.

## SCARLET FEVER AND ITS COMPLICATIONS\*

C. P. SAVAGE, M.D.  
*Montezuma*

Regardless of the great progress which has been made by medical science during the last fifty years we still have to deal with many diseases over which we have little control so far as specific prevention and cure is concerned. On the other hand there are a number of diseases over which medical science has triumphed almost completely, such as typhoid fever, small pox, diphtheria and others. Consider diphtheria as it was only a few short years ago, taking its toll by the thousands every year, and the physician all but helpless in the treatment and cure of the disease. Now we not only have at our command a cure for the disease after it has developed, but a simple preventive which is easily given, and one which we can recommend to our patients as harmless in its effect and almost 100 per cent positive in its results as a preventive.

I have chosen as my subject today a disease which lies midway between the two great groups mentioned above. A disease which so far has not been conquered completely either as to preventive treatment or cure.

I shall attempt here to give a brief review of scarlet fever and its complications because I feel convinced that we have minimized the importance of this disease, both as a cause of death and also as a cause for serious complications which affects are carried through the remainder of the patient's life.

There were during 1933 eighteen scarlet fever deaths in Georgia, a rate of 0.06 per 100,000 population. A decrease over previous years in actual death rate, but there is no reason for encouragement in this fact since the many complications and sequelae are always to be reckoned with and we have no statistics to prove a decline in these. There were only 433 cases of scarlet fever reported in Georgia last year: this perhaps does not represent more than a small percentage of the actual cases, for two reasons, first, we are

sometimes negligent in reporting communicable diseases to the State Board of Health, and second, there are many mild cases which do not lend themselves to easy diagnosis and consequently go undiagnosed until perhaps a complication arises.

It is stated that scarlet fever in the South is much milder than that which occurs in the northern states and in Canada, and that complications are not so apt to occur as in this section. I agree that I believe that our scarlet fever is as prone to develop complications as that found anywhere, and that many times our mildest cases may end with some of the more serious sequelae, such as middle ear infection, mastoiditis and septicemia.

Scarlet fever is an acute, contagious and self-limited disease, characterized by pharyngeal inflammation, sudden onset, a diffuse scarlet eruption, high fever and scaling. It is found in all parts of the world, but some sections are supposed to be comparatively immune, because of the high temperatures and increased humidity at certain times of the year. The zone of this comparative immunity is supposed to be found between 30 and 35 degrees N. latitude and comprises the states of Georgia, South Carolina, Alabama, Mississippi, Louisiana and Texas. However, the disease is found in all parts of this supposedly immune belt in endemic form and at intervals reaches epidemic proportions. Late winter and spring is supposed to be the period when most cases occur, but in my experience I have seen more scarlet fever in the late fall and winter than later in the season. The period of incubation is relatively short, being from 24 hours to seven or eight days, the average being two to four days. After the incubation period the disease develops rapidly, and within 24 hours the following symptoms will be noted, general malaise, sore throat accompanied by vomiting, high fever, headache and a rash developing from below upward, from the body to the face and neck. There is an enanthema as well as an exanthema. This enanthema shows up on the fiery red background of the mucous membrane of the mouth and throat, and the tonsils are the site of the greatest intensity of the eruption. Many times they are badly

\*Read before the Medical Association of Georgia, Augusta, May, 9, 1934



swollen and may be covered with a pseudo-membrane which to the physician who is not alert may cause confusion between diphtheria or tonsillitis and scarlet fever.

The tongue is a point of special interest and is usually covered with a white furry coat through which the papillae are seen. First, the white strawberry tongue, then the red strawberry or raspberry tongue within three or four days. A study of the tongue may help to determine the length of time the case has been in progress. The pulse is small and rapid, even more than the fever would indicate.

The glands in the region of the head and throat are enlarged early in the disease and usually become hard and painful. The temperature remains for about three to six days, in the normal case and ends by lysis, but the desquamation process goes on for two or three weeks. The laboratory findings are confined to the urine, the blood and swabs from the nose and throat. Leukocytosis is increased up to 35 or 40 thousand in severe cases, the differential count shows a relative increase in the polymorphonuclear leukocytes. The urine is scanty, usually dark in color and at the height of the fever contains varying amounts of albumin, this albuminuria usually clears as the fever recedes. Swabs from the nose and throat show the presence of the streptococci.

After a diagnosis in scarlet fever has been made the treatment should be instituted as follows: rest in bed for a period of from two to four weeks is necessary, a suitable diet and suitable hygienic surroundings with plenty of fresh air is essential. In general, milk should be made the main part of the diet with the addition of vegetables and fruits and cereals as soon as convalescence has progressed to the point where swallowing is possible. A low protein diet is regarded as necessary in order to protect the kidneys through the height of the fever. The patient should not be allowed to become chilled, but cold air rather than warm rooms are more to be desired. In the simple uncomplicated cases of scarlet fever drugs play a very small part except as symptomatic treatment becomes necessary. When sleeplessness and restlessness begin to interfere with the progress of the

patient, opiates, preferably in the form of codeine, and rarely some of the barbituric acid group may be used to advantage.

The septic complications call forth the greatest need for treatment and generally these come in some form in almost every case. Septic sore throat, septic rhinitis and sinusitis, cervical adenitis, septic laryngitis, septic arthritis, otitis media and general septicemia are among the complications which arise and demand attention in the handling of scarlet fever. I shall confine myself to some of the more common complications.

The first of these and possibly the most common is septic sore throat, in fact so commonly found that it may be considered as a part of the disease itself. It tends to do well if not abused, and by this I mean that it should not be over treated. If the patient is old enough to cooperate, possibly the best form of treatment is by irrigation with weak sodium chloride solution or warm hypertonic glucose solution, 25 per cent. The solution should be used under low pressure and strangling should be avoided. Cold compresses to the neck are helpful. Do not use any mechanical or chemical irritants in the throat at this time because these damage the tissues to a far greater extent than the good which may be accomplished. Gargles consisting of mild antiseptic solutions such as hexyl-resorcinol combined with glycothymolen solution may be used where irrigations are impracticable. The management of the throat condition at this period is very important because it is through the throat that most of the later complications gain their entrance into the blood stream, consequently the treatment of this early complication becomes a matter of major importance.

In the treatment of septic rhinitis and sinusitis mild astringents may be employed in the form of argyrol and neo-silvol and solutions containing ephedrine are found to be of value in keeping the mucous membranes clear and controlling the edema which may be present.

Otitis media which is a very common complication occurs in about 10 per cent of the cases. The previous condition of the nose and throat possibly play a large part in the

development of otitis media being much more common in those children which have faulty adenoids and tonsils. Frequent examinations of the ear drums are necessary as the complication may arise without the patient complaining of marked pain or discomfort with the ears. When the condition does arise and the drum is seen to bulge, it should be incised promptly as a delay of a few hours sometimes may mean a ruptured drum which causes the patient to run a far greater risk of regaining the normal hearing than does in the simple clean-cut incision.

Nephritis following scarlet fever is a frequent complication, consequently a check of the urine should be made often. The onset is sudden and is accompanied by headache, vomiting, loss of appetite and rise of fever. A peculiar pallor with swollen eye lids may be the first symptoms to present themselves. The urine is scanty and shows albumin and free blood cells and hyaline and granular casts. The complication reaches its height in three or four days, but subsides very gradually. The patient should be kept in bed, placed on a low protein diet and mild alkaline kidney stimulation given.

Septicemia is possibly the cause of the greatest number of deaths of any of the complications and those of you who have had the misfortune to treat a patient with this complication cannot help but be impressed with the seriousness of the consequences. In a typical development of septicemia the scarlet fever may run its course and the fever may return to normal, and then a secondary rise may occur within a few hours. The throat which is usually the site of the inroad of infection takes on a renewed appearance of inflammation and the tonsils become decidedly involved, even to the point within a few days of marked sloughing. The fever becomes undulating in character running as high as 105 very often sometime during the twenty-four hours. The septicemia is slowly progressive with at times some indications which would lend hope of a recovery. Some cases do recover, but it is generally very fatal.

A foci of infection other than the throat may be found and if located drainage should be instituted at once. Possibly the best treat-

ment for septicemia following scarlet fever is transfusion from convalescence donors. J. E. Gordon in the *Journal of the American Medical Association* for January 14, 1933, advocates the transfusion of whole unaltered blood as the best method of transfusion. Other men report the use of the citrate method of transfusion as being just as effective. In my own opinion I feel that the method that is best handled by the individual doctor should be the one to use and I believe that the advantage to be gained by transfusions are not lost in the citrate method. These transfusions should be given in small quantities from 50 to 200 cc. at daily intervals for the first three or four days rather than trying to give a larger transfusion at any one period.

In the beginning it has been stated that scarlet fever is a border line disease which has not been satisfactorily controlled. So far I have said nothing about immunization and serum treatment, because it would seem that this phase of the discussion needs special consideration.

The etiology of scarlet fever has been definitely proven, consequently it should be a fairly easy matter to place the disease under positive control by developing scarlet fever antitoxin, but the trouble which bacteriologist and clinicians have encountered are that even though the hemolytic streptococcus has been isolated as the causative factor for the disease, it is found that susceptibility of human beings to different strains of the hemolytic streptococcus varies considerably not only with the strains which produce scarlet fever, but with the miscellaneous other strains also.

For several years now scarlet fever antitoxin has been used rather generally in the treatment of cases of scarlet fever and the literature would indicate rather variable results with its use. A report released by the Cincinnati General Hospital on a series of cases treated with serum seems to give about the best evidence as to the indications for its use and the results to be expected. They report a series of 196 cases divided and treated in three different ways. Group I received scarlet fever antitoxin bought in the open market prepared with four strains of hemolytic streptococci. Group II received scarlet fever antitoxin made from only one strain of hem-



olytic streptococci isolated from a case of scarlet fever. Group III was treated only symptomatically and was used as a control group. The results show clearly certain things for our guidance in the use of serum. First of these is that if serum is to be used it should be administered as early in the disease as possible. The duration of the eruption in the control group averaged 6.8 days—4.3 days was the extent of the eruption in the group with the mixed antitoxin and 4.4 days in those treated with the serum made from a single strain of the hemolytic streptococcus. Desquamation period in the control group was 26.2 days while those in the other two groups averaged about 20 days. It seems that the greatest difference in the two antitoxin groups and the control group was the intensity of the desquamation. This was much more marked in the control group and a tendency for the desquamation to be very mild in those cases treated with antitoxin mixed. Temperatures did not seem to be very different in the three groups other than a slightly higher temperature in the mixed antitoxin group for the first few hours after administering the serum. Scarlet fever primarily has become so mild that but few deaths occur than from some of the complications, consequently serum treatment has its real significance in its bearing on the development of complications. A study of the expected complications was made at the same time using the control group as an indication for the appearance of complications in the serum treated groups. It was found that only a slight decrease in the number of complications really occurred and that the severity of the complications was not affected to any appreciable extent.

It is noted that scarlet fever antitoxin does have a specific affect on the toxin produced by the hemolytic streptococcus, but that it does not restrict materially the spread of the organisms itself and that the complications are almost as liable to happen in those cases treated with serum as those not treated.

One point which presents itself for serious consideration is the incidence with which we are liable to have serum sickness. In the cases treated at the Cincinnati General Hospital referred to above 66.3 per cent developed serum

sickness in varying degrees. Any patient who has previously had horse serum of any kind is almost sure to develop serum sickness. Many of these patients become very ill and some desperately so. Antitoxin made from only one strain of scarlet fever does not have the same high percentage of serum sickness as that antitoxin made from several strains of the scarlet fever organisms. The mixed serum in those cases not previously having horse serum, caused sickness in 66.7 per cent of the cases while the single strain serum does not produce sickness in but 16 per cent of the cases.

With the present development of scarlet fever serum and in the light of past experience and reports at hand I feel that we should use serum very guardedly in treatment.

Scarlet fever immunization is a problem which we must consider along with many others in the realm of preventive medicine and in this phase of the discussion we are approaching, I believe, a stage of real enlightenment. Immunization is divided into two phases. Passive immunization and active immunization. Passive immunization is done by injecting children with small amounts of scarlet fever serum who have been exposed to scarlet fever and have been found to show a positive reaction to the Dick test. This method gives immediate immunity to approximately 90 per cent of patients and this immunity is reported to last from three to ten weeks. Care should be exercised in giving this prophylactic dose as patients who are sensitive to horse serum will get a reaction. Active immunization of Dick positive cases should be done where the immediate danger of contacts have passed and this is accomplished in one of two or three ways now available. The one most generally used is the injection of the Dick immunization toxin which is given at weekly intervals for five consecutive doses. This method possibly immunized about 75 per cent of the Dick positive children.

Dr. Maurice L. Ripps in a preliminary report in the *Journal of the Medical Society of New Jersey* in December, 1933 gives his experience in scarlet fever immunization of 147 Dick positive children by the inunction method. These positive immunizations were done

by mixing Dick toxin mixed, with lanolin, showed immunization as high as 73 per cent in age groups of one to four. The percentage decreased in the older age groups. He states that there are absolutely no general systematic affects. This method may have met with merit and bears further observation.

From Toronto and the *Canadian Public Health Journal* of October, 1933, it seems to me comes the greatest encouragement. J. G. Fitzgerald reports the use of scarlet fever toxin in general use in the immunization of children against scarlet fever. He reports 60 to 70 per cent immunization. He also states that scarlet fever toxoid has just been made available and that the reactions to it are much less than in cases where the toxins are used. He has also treated small groups with mixed diphtheria and scarlet fever toxoid with no more reaction than would be expected from the diphtheria toxoid. The percentage of Dick negative children was about the same as those treated singly.

I hope and believe that the time is almost at hand when we can test our children for their susceptibility both to scarlet fever and diphtheria and give them either the scarlet fever or diphtheria toxoid and if found susceptible to both, the mixed toxoid as a preventive.

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*Discussion on Paper by Dr. C. P. Savage*

DR. WILLIAM A. MULHERIN (Augusta): I can only stress a few of the important points brought out by Dr. Savage in his excellent paper. There is no difference of opinion between us. I think he has rightly stressed the complications of scarlet fever, rather than scarlet fever per se, because we are all noting today that scarlet fever is gradually growing milder. Whether the infection is becoming attenuated or whether the human race is resisting it better is debatable.

The complications are what give the most trouble. I think it is nice to think of complications associated with diseases in this light: take, for instance, diphtheria. The toxins have a special affinity for the heart, nerve tissues, kidneys, and there is where you look for your complications. We know that scarlet fever toxins have a special affinity for the ears, mastoids, sinuses, the glands, and the kidneys, and there is where the complications will be found. They are nasty complications.

Regarding diagnosis, there is but one point I should like to stress, for the simple reason that Dr. Savage has brought out in a masterly way a classic picture of

the symptomatology of scarlet fever. That point is this: If you see a case where the onset is rather acute, with a sore throat and a rash, within twelve to thirty-six hours, the case is scarlet fever until you can disprove it. In such cases where it is hard to make an accurate diagnosis, this fact will help out nicely, I think, in arriving at the proper diagnosis.

Treatment is important, and I feel as Dr. Savage does. The serum treatment, the antitoxin treatment, the toxin immunization treatment, have not been fully accepted by the medical profession, by pediatricians as a whole, who give their special attention to the study of children. I have not adopted it myself, personally, because Dick's immunizing toxin gives us a variable length of immunization, protection, anywhere from three to ten weeks it is recognized, and I think I should like to promise the mother a bit more than that in giving the protective doses of the scarlet fever immunizing toxin.

Regarding the serum, the antitoxin to protect after exposure, the reaction is very sharp indeed, and as a method of treatment I have found that I can get about as nice results by not using it as when using it, except when we occasionally encounter very virulent infection in scarlet fever.

The simple method of keeping the mouth clean with sprays, the nose open, giving plenty of water to drink, keeping the bowels regular, keeping the child in bed, quiet, on a nice, nutritious, more or less carbohydrate diet, keeping that child in bed a week after all fever has left, has given me the very best results. And while there is promise from the antitoxin, particularly with inoculations, I think we had better wait a little longer and let them be perfected.

DR. FRANCIS B. SCHLEY (Columbus): I have wondered oftentimes how contagious a disease scarlet fever is. I have seen a fair amount of it, and have seen two cases in one family but once. I wonder if it is not like poliomyelitis in that we may have it oftentimes in such a mild form that it is not recognized; we have a slightly sore throat and no demonstrable rash or we have so-called walking scarlet fever. We either become immune that way; or it is not so contagious a disease as some people seem to think it is.

I have often had trouble convincing parents that the child had scarlet fever. I do not know whether the rest of you have had that trouble or not. As one physician told me, "if they don't die, the parents don't believe they had scarlet fever."

I have had one or two cases with a light rash, and there was no doubt in my mind that it was scarlet fever, which was later proved by the scaling of the fingers, but I could not prove it to the parents because the child was not very ill. The fact is, no doubt, that the disease is much milder than it was in the olden days, because people have such a horror of it.

I find the worst part of the treatment is in treating the convalescent, from the standpoint of the child himself. If you keep him in bed ten days after he is normal, you have either a very cooperative mother or a marvelous child to treat. They just worry the



mother to death to let them be up and about after the fever is gone. But I do believe that rest in bed is one of the main features in the prevention of the complications, which, as the doctors have so aptly stated, is a serious part of the disease.

The disease itself does not register as a serious malady with me, but the complications are, and I think the main thing in the treatment is the convalescence; to recognize it, to convince the parents they have it, and keep them in bed. If you keep the children in bed the proper length of time, you won't have much trouble.

DR. C. P. SAVAGE, (Closing): I take this opportunity to thank the gentlemen for discussing my paper. There are just one or two things which I would like to mention in closing and these are; first, as Dr. Mulherin has said, that the complications following scarlet fever are more important and we should lend our efforts towards an early diagnosis and then watch the complications. In regard to Dr. Schley's discussion as to susceptibility of patients to scarlet fever I would like to add that possibly a great proportion of children are susceptible to scarlet fever if brought in contact with the disease, and as you know this susceptibility can be proven by the Dick test. Many of the isolated cases of scarlet fever which we are called on to treat, seeing as we do, from one to several cases in a community in a season, come in my opinion, from carriers. I believe that the carriers of scarlet fever are possibly more prevalent than we have heretofore expected. I believe that a great many children who have had scarlet fever possibly in a very mild form carry the disease. I think, as a chronic otitis media or more actively in the secretion from the nose and throat.

I want to stress the importance of early diagnosis and complications in treating scarlet fever.

#### HONOR ROLL FOR 1934

1. Randolph County, Dr. G. Y. Moore\*, Cuthbert, December 12, 1933.
2. Macon County, Dr. Thomas M. Adams, Montezuma, January 13, 1934.
3. Henry County, Dr. H. C. Ellis, McDonough, January 18, 1934.
4. Hancock County, Dr. H. L. Earl, Sparta, February 17, 1934.
5. Wayne County, Dr. A. J. Gordon, Jesup, March 12, 1934.
6. Monroe County, Dr. G. H. Alexander, Forsyth, March 19, 1934.
7. Ware County, Dr. Kenneth McCullough, Waycross, March 19, 1934.
8. Turner County, Dr. J. H. Baxter, Ashburn, March 24, 1934.
9. Lamar County, Dr. J. M. Rogers, Barnesville, April 2, 1934.
10. Dougherty County, Dr. H. M. McKemie, Albany, May 7, 1934.
11. Whitfield County, Dr. H. J. Ault, Dalton, July 28, 1934.

\*Deceased.

## ALLERGY\*

M. A. EHRLICH, M.D.

*Bainbridge*

Among the host of terms used for this condition may be found allergy (altered reactivity), anaphylaxis (without protection), atrophy (strange disease), protein sensitization, toxic idiopathies, hyperergy, protein hypersensitiveness, idiosyncrasy and others. In man these terms refer to such apparently diverse conditions as asthma, hay fever, eczema, urticaria, gastrointestinal upsets and migraine, as well as to many other affections in which a similar mechanism is thought to play a part.

Allergy may be defined as a hypersensitivity of the body cells to one or more specific proteins, and when such proteins come into contact with a sensitized cell it manifests itself in one of the allergic diseases.

In all of these different conditions heredity plays an important part for with the majority of them are found one or more of the allied allergic diseases if a careful history is taken. For example if the patient is suffering with asthma, the history will show in the majority of cases that the patient had previously suffered either eczema, hay fever, urticaria or some other allergic manifestation. Also that one or more of his brothers, sisters, children, parents, aunts, uncles, or grandparents have experienced some of the same expressions of allergy.

This does not mean that the disease is directly inherited, but it does mean that the allergic condition is inherited according to the Mendelian Law, and that those susceptible individuals will manifest some allergic disorder should their particular offending protein be present in great enough quantities.

This chart depicts a family history of four generations comprising thirty-eight members. There were twenty-four allergic individuals manifesting twenty-one cases of asthma, seven of headaches, one of hay fever, two of urticaria, one of laryngeal stridor, and two of drug urticaria. As it was impossible to ob-

\*Read before the Chattahoochee Valley Medical and Surgical Association, Radium Springs, Albany, July 12, 1934.

tain any history of ten members and practically none about eczema, stomach and intestinal allergy and other minor manifestations, it may be possible that the above number of allergic individuals should be increased.

It is of great importance that in all histories a careful inquiry of all allergic manifestations be noted. Hardly any branch of modern medicine can be found, in which some form of allergy will not show its presence, either as a direct condition or as a complication and unless this condition is taken into consideration and proper treatment instituted complete and permanent results should not be expected. Asthma and allergic bronchitis may simulate or be wrongly diagnosed as pneumonia or pulmonary tuberculosis. Cases are on record where these and other pulmonary diagnoses have been cured by allergic methods.

Allergic croup<sup>1</sup> may be of any degree of severity. From mild cases of spasmodic croup in childhood to spasmodic edema of the larynx and suffocation due to anaphylactic shock. Pulmonary and laryngeal oedema are rarely found except in allergic individuals, and deaths from these causes cannot be anticipated. They might be prevented by previous allergic treatments. Numerous cases of cardiac involvement, especially those without demonstrable pathologic lesions have been shown at times to be allergic in origin.

Gastrointestinal manifestations of allergy are caused by ingested foods, and may be due to a direct contact of the protein upon the mucosa or as a part of a general reaction after the protein has been absorbed.<sup>2</sup> The intensity of this reaction may vary from the mild to the most severe and may make its presence known by any of the gastrointestinal symptoms. It is possible that many of the cases of chronic indigestion, in which the physician cannot satisfy himself of the presence of any organic lesion, are due to edema-muscle-spasm caused by local allergic reactions in the intestines<sup>3</sup>.

The following case reports show instances of intestinal allergy.

A child, aged fifteen months, suffered with acute colitis with rectal prolapse and twenty stools a day. The eosinophiles were 12 per cent and the skin test was positive to milk. There was no improvement on ordinary treatment. Without change of medication but eliminating the milk, the stools were reduced to three

of normal appearance two days after beginning treatment.

A child, aged sixteen months, had abdominal cramps with enteritis and was found to be susceptible to tomatoes. By eliminating them the condition rapidly improved.

Owing to the acuteness of the abdominal cramps and the tenderness over the edematous gut produced by areas of local allergic reactions in the bowels, a diagnosis of appendicitis, cholecystitis, and peptic ulcer has been made in allergic persons, and operations have been performed which were needless and failed to afford the patient the slightest relief. No allergist pretends that all persons with acute abdominal pain are allergic, but they should point out that some of them certainly are, and they urge the practitioner and especially the surgeon, should give this aspect of medicine more consideration in those cases in which the symptoms are not accompanied by characteristic physical signs of organic lesions, and especially in those unfortunates who return some months after the removal of an appendix or a gallbladder with the cheering news that the symptoms are as bad as ever<sup>3</sup>.

While the allergic nature of all cases of idiopathic epilepsy has not been proven and probably does not exist, there is strong evidence that at least a certain percentage of them are allergic and curable. In a disease the outlook of which is so poor, one should grasp at any straw which holds out hope of curing even a small percentage of epileptic.<sup>3</sup>

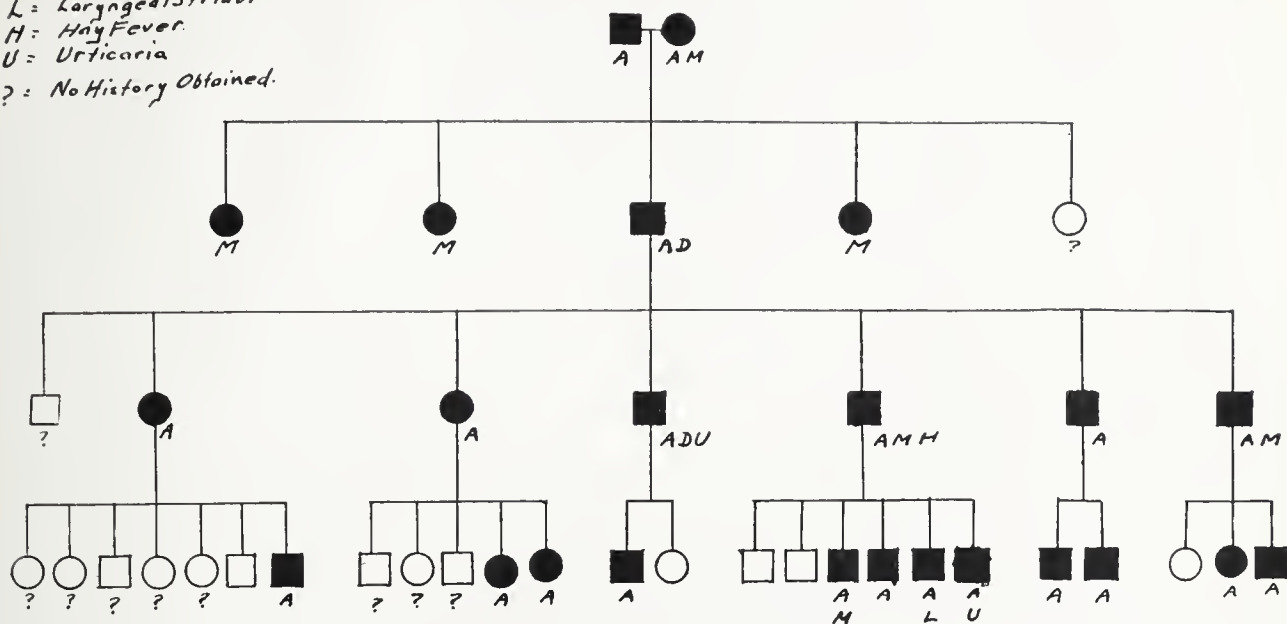
If the practitioner, and especially the rhinologists had a more thorough appreciation of the allergic nature of many of the chronic incurable nasal conditions which they treat palliatively year in and year out, there would be less unsuccessful nasal surgery and a great decrease in the sniffing population<sup>3</sup>.

Here we find such varied conditions as sneezing spells, rhinitis, tickling of the nose, throat and palate, nasal and paranasal sinusitis, enlarged turbinates, and other surgical conditions in this region, especially those that have been repeatedly subjected to surgical procedures, which at best afforded only temporary relief. These patients on close examination will be found to have a mucous membrane which is swollen, boggy and pale; and a smear of the nasal secretions or the sinus



A: Asthma  
M: Headaches  
D: Drug Urticaria  
L: Laryngeal Stridor  
H: Hay Fever  
U: Urticaria  
?: No History Obtained.

○ Female  
□ Male



discharge will show a predominance of eosinophiles. They will often obtain permanent relief by allergic methods of treatment.

For illustration, a man, aged 45, had been having sneezing attacks and a clear watery nasal discharge for 16 years. The eosinophiles were 4 per cent and all tests were negative. His reaction to autogenous room dust was slightly positive. I found that chimney swifts were nesting in his chimney. An extract from their feathers gave a slightly positive action. To connect these I made an extract from the swifts' dung and found his reaction to it was highly positive. Under this treatment he has obtained almost perfect results.

A boy, aged 17, had suffered for years with headaches. He had been treated by several specialists, who changed his glasses, and drained and irrigated his sinuses on several occasions. Each procedure gave temporary relief. The eosinophiles were 10 per cent. He has had relief since being treated with dog dander, to which he was susceptible.

Dizziness and tinnitus would give the otologist much less concern if he would remember that local oedema in this region can be caused by allergy. While eczema, urticaria, angioneurotic oedema and contact dermatitis have long been known to be allergic, there may be many and varied manifestations of allergy present to baffle the best dermatologists.

A woman, aged 39, had been suffering for 3 months with attacks of swelling of the face, especially the eyes. At times it was so severe as to close the eyes and produce fissures on the outer surfaces of the upper lids. A patch test with her face cream (Burnams' Cucumber) was highly positive. No further

trouble has been experienced since discontinuing this cream.

A woman, aged 53, had suffered severe itching between the shoulders all her life. Her mother had the same complaint. The eosinophiles were 13 per cent. Quite satisfactory results have been obtained with tomato extract.

A baby, aged 16 months, had suffered almost continuous urticaria for 8 months. She was susceptible to pork. The eosinophiles were 6 per cent. Elimination of the pork from her diet has cleared up the trouble.

A number of cases of intractable fever have been attributable to allergic reactions. To this series I wish to add one of my cases. A child, aged 16 months, began having unexplained fever at the age of seven months. There was nothing found to account for this fever. Her eosinophiles count was 6 per cent. I found her allergic to wheat and when this was eliminated from the diet the fever disappeared only to return when it was given to her again.

The allergic nature of primary diseases of the eye has received but little attention. Individual reports of cases of vernal conjunctivitis<sup>4</sup>, scleritis<sup>5</sup>, recurrent retinal edema<sup>6</sup> and episcleritis<sup>7</sup> of allergic origin which were cured by the removal of the offending allergins have been reported. These cases suggest that the oculist, by keeping allergy in mind, may increase his percentage of successes in certain troublesome eye conditions<sup>3</sup>.

When one considers the tremendous local swelling which occurs in the skin in angioneurotic edema or giant urticaria, it is easy to understand how a similar acute swelling

occurring in the cranial cavity could cause neurologic symptoms of all kinds and descriptions.

There is probably no disease which causes more prolonged and intense suffering and a greater amount of disability than arthritis. When we eliminate tuberculosis, gonorrhea, syphilis and active infected joints from this category, we still have a large group of arthritides in which the etiology is unknown. Many studies would seem to suggest that at least some of these causes of arthritis are of an allergic nature, and in conditions of such long standing and which are so resistant to therapy, it is possible that allergic studies may hold out some hope for the sufferer<sup>3</sup>.

Irritable bladder<sup>8</sup>, enuresis<sup>9</sup> and uterine cramps<sup>10</sup> have been described as allergic symptoms in isolated instances<sup>3</sup>. Some patients with kidney, ureter, bladder and urethral complaints have given the urologists much concern until the allergic nature of the disease was demonstrated.

All patients in whom the family history or the past or present history is suggestive of an allergic predisposition, where the differential blood count has an increase in eosinophiles, where the nasal secretions or the sinus discharges have a predominance of the same cells, where repeated surgery has given only temporary relief of the symptoms, where a complete diagnosis cannot be made, should be seen by an allergist for thorough examination and testing. In many of these cases he alone will be competent to come to the correct conclusions and institute the correct line of treatment. Under proper technique allergy certainly holds a very important place in medical and surgical treatments. Results are being obtained in many cases where heretofore medical and surgical treatments have given only temporary relief, partial relief, or no relief at all.

The allergist does not claim that he can work miracles and he cannot cure all chronic incurables, but he can cure certain diseases previously considered incurable. The allergist does not ask that all patients be turned over to him for careful study and thorough testing, but he does ask that the physicians and surgeons give their patients the chances of relief offered by this method of treatment.

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## BRODIE'S ABSCESS

### Case Report

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Macon

### Definition

Brodie's abscess is a localized and circumscribed area or cavity occurring usually near the center of the metaphysis of long bones being filled with serum or pus, lined by a fibrous membrane, surrounded by sclerosed bone and having a tendency to obliterate the adjacent medullary cavity.

### History

Sir Benjamin Brodie in 1824 amputated a leg to relieve his patient from an agonizing pain just below the knee which was of twelve years duration and intermittent in character. Being of an aggressive nature, intellectual mind and possessed with untiring efforts he was not satisfied to have relieved by merely removing the offending member. He sectioned the severed leg and found just such a condition as afore defined and was resolved that such conditions when properly diagnosed could and should be treated effectively by a more conservative plan of surgery. His next case was seen two years later and treated quite successfully by trephine and drainage. It was from Sir Benjamin that medical literature received its first description of the condition which now bears his name, Brodie's Abscess. Thompson in 1906 collected and reported 161 cases which is our largest single collection. Gross reported 141 cases in 1901 but his works are not available for study at this time. Thirteen cases observed at the Mayo Clinic have been reported together with twenty-six other collected cases. The works of several others, citing small series of cases or isolated cases, have been studied.

\*Read before the Macon Medical Society of Bibb County, Macon, March 20, 1934.



### *Etiology*

Contrary to the teachings of some this condition is not due to or the result of a tuberculous bone infection. Exhaustive laboratory procedures mark the staphylococcus as the most frequent etiological agent. Next in order of frequency is the bacillus typhosus. Some of the more rare organisms are the staphylococcus hemolyticus and the streptococcus hemolyticus. Trauma has in past years received a lot of credit for giving rise to a Brodie's abscess but I am convinced that traumas' major part is that of an indicator; that is, the disease was present in a quiescent stage and due to some occasioned violence attention was drawn to an ailing part previously overlooked altogether or explained as "growing pains" or more frequently "rheumatism." It is generally recognized that in the presence of foci of infection the tissue which offers the least resistance is the one most likely to be involved first. Now, given such a bodily condition, I can believe that trauma to a bone might easily predispose this area to a localization of an infective process but we are now dealing with a mere coincidence. Then trauma plays only a minor or contributory part.

Out of the 145 cases in Thompson's series, in which there was a complete history, 84 per cent gave a record of previous osteomyelitis. We must, then, recognize that there are certain predisposing factors of which pyogenic bone infection is the most frequent, however a general debility of any kind, as is true in bodily affections of other nature, lays down the bars of resistance and opens the portals to infection.

It is only fair to state in deference of the trauma theory that quite frequently cultures of the content of a Brodie's abscess prove to be absolutely sterile but I believe you will agree that the same is true in certain other localizations of pus elsewhere than in the bone when ample time has elapsed, this period of time depending upon the bodily resistance of the patient and the virulence of the invading organism. Puncture and stab wounds of the bone should be mentioned as mere possibilities.

### *Pathology*

Brodie's abscess has been reported as occurring in long bones, the pelvic bones, and the spinal column. In the latter location the spinous processes and the neural arches being more frequently involved than the bodies of the vertebra and fortunately so. This being a point in the differential diagnosis between Brodie's abscess and tuberculosis of the spine. In Thompson's series of 161 cases, 119 were found to be in the tibia of which number sixty-three were in the upper end, eighteen in the femur, eighteen in the humerus, four in the radius and two in the ulna. Just why the tibia should be so ill favored by this malady is a point for discussion. Some authors cite this in support of the theory of trauma being a leading causative agent since the tibia is more subject to violence than other bones and too the condition is several times more frequent in man than in woman. It should also be stated that middle-aged adults are most frequently affected by this condition.

There is usually swelling of the extremity over the lesion, hydrops of the adjacent joint and rarely superficial dilatation or enlargement of the veins. On section we are apt to find a thickened periosteum. There is marked evidence of a productive osteitis or bone sclerosis. The cavity, according to Thompson, whose views are fairly generally accepted, presents three stages: (1) The quiescent stage in which a minute cavity filled with serum and lined with a more or less well defined membrane resembling the periosteum of new bone is found. (2) The mature stage or abscess stage in which the lining membrane has given rise to granulation tissue and the serous content converted to pus. (3) The stage of perforation and external drainage which is not the rule and in fact only in a few such cases has it been encountered.

Wilensky writes about this condition and feels that the abscess has its origin in a thrombophlebitis developing around a thrombo-embolus arrested in a terminal vessel of the vascular network in the diaphysis of the long bone.

Due to the quiescent stage one case has been reported as having a duration of sixty years.

The shortest quiescent stage on record is five weeks. It is the second or mature stage in which the symptoms are so manifest and the patient so earnestly seeks relief. Situated as the cavity usually is in the soft spongy cancellous bone, sequestration is not the rule, but rare. The intermittent pain which is so characteristic can be explained on a pathologic basis by gradual increase of tension in the cavity and pressure on the sensitive granulations and lining membrane referred to by earlier writers before the day of anesthesia as giving rise to the periods of excruciating pain and a further extension with breaking down in the cancellous bone and consequent temporary relief of tension as responsible for periods of relief of pain.

When extension from its usual location is seen it is more apt to be toward the center of the bone or medullary cavity. Authorities differ as to whether a true Brodie's abscess can be one located in the medullary portion of the bone or not, some claiming that Sir Benjamin's original description places it in the spongy cancellous bone near the epiphyseal region only. It is my opinion that either location is possible only that the latter is more frequent or at least more readily diagnosed since the roentgen ray seems to show a lesion here sooner than in the medullary region. This fact being accounted for by the earlier sclerosing wall in the spongy bone.

The roentgen ray usually shows a spindle shaped enlargement of the bone involved. There is apt to be a thickening of the periosteum, sclerosis of the bone in well defined cases, with a sharply outlined cavity showing as a rarefaction and varying from the size of a pea to the size of a walnut or even larger. Here, as in all other conditions, we meet with exceptional cases which "take the cake," so to speak. There is a specimen of a tibia in the museum of the Royal College of Surgeons in Edinburgh which was during life capable of holding 500 cc. of pus. It had an external communication which was kept plugged with a wooden stopper and was periodically drained. The owner lead a moderately active life it was said.

#### *Symptoms*

I have already stated that the condition is

most often seen in middle-aged males. Frequently a history of a previous osteomyelitis is given. Some blame trauma. The characteristic symptom is an agonizing, boring pain which comes and goes. To quote Brodie we read: "When the tibia is enlarged, from a deposit of bone externally, when there is excessive pain, such as may be supposed to depend on extreme tension, aggravated at intervals, and these symptoms continue and become aggravated and do not yield to treatment, you may reasonably suspect the existence of abscess in the center of the bone. You are not to suppose that there is no abscess because the pain is not constant. On the contrary, it very often comes on only at intervals, and in one of the cases which I have related there was an intermission of seven to eight months. After it has lasted a number of years, the pain never entirely subsides, still it varies."

Fever is not the rule and when present is of a low grade nature. Leucocytosis may or may not be present, there was both a mild elevation of temperature and leukocytes in the case which I shall present. Few writers mention the severe sweats. The pain seems more pronounced at nights, is aggravated by motion, exercise, pressure or sudden jarring. A limp may be seen as may partial loss of function of the neighboring joint. The roentgen ray is of great value in making a diagnosis.

#### *Differential Diagnosis*

Several conditions must be differentiated before reaching a positive diagnosis of this disease. To quote my distinguished and beloved professor, Dr. John Chalmers Da Costa: "An intuitive diagnosis is a rapid method of reaching a wrong diagnosis."

1. Bone cyst lacks the pain and local tenderness and instead of the marked sclerotic condition so characteristic of Brodie's abscess there is usually a thinning out of the surrounding bone.

2. Sarcoma may give rise to pain but it is rarely so severe as in Brodie's abscess. The progress is more rapid in sarcoma. Sarcoma is more prevalent in children than is our subject and we see superficial dilatation or enlargement of veins more frequently here. Roentgen ray shows no discreet area of rare-





Figure 1.

X-ray of case, J. D., made in 1929 showing Brodie's abscess in femur.



Figure 2.

Same case four years later. Abscess somewhat more clearly outlined.

faction but a tumor with an irregular blurred outline which is frequently streaked with spicules of newly formed bone.

3. In syphilitic periostitis we usually get a history of the primary lesion and more frequently a positive Wassermann test with possible luetic evidence elsewhere in the body.

4. Chronic sclerosing osteitis gives rise more frequently to general symptoms, such as fever, leukocytosis, etc. And the characteristic area of rarefaction seen in the roentgen ray referred to before is lacking. However, the two conditions resemble each other very much in that there is the spindle-shaped sclerosis but in this condition there is more encroachment upon the medullary canal and the spindle formation tends to be more nearly in the middle of the long bone involved.

5. Tuberculous abscesses are usually smaller. There is a greater tendency toward sequestration, rupture externally or through the epiphyseal plate to involve the adjacent joint. Tuberculous processes usually tend to be destructive bone lesions while Brodie's abscess is a productive, sclerosing one. Laboratory work and animal inoculation may be necessary to absolutely rule out tuberculosis.

Other conditions such as acute inflammatory rheumatism, gonorrheal rheumatism,

and infectious arthritis, have been mentioned as necessitating differentiation. In these a careful history and systemic manifestation together with routine laboratory study should suffice to establish a correct diagnosis.

#### *Treatment and Prognosis*

The treatment is surgical. It has ranged from the ultra radical to the opposite end of the scale where we find the radically conservative. Brodie, along with some of the earlier surgeons in an effort to uphold the time-worn tradition of the true physician who ever endeavors "to comfort always, to relieve often, and cure sometime," amputated one or more limbs. Bevan opened, gouged out and curetted the diseased bone, flushed the wound with hydrogen peroxide then alcohol and at once sutured the soft parts completely. Brickner prefers to make a small drill opening into the cavity and does no more except to place a small, folded, rubber dam in the soft parts down to but not into the bony opening. He prefers to do a culture of the pus and an immediate smear. One should be governed by the number of organism found in the smear as to whether a more radical operation should be resorted to.

Most men today prefer to open the cavity by use of drills and rongeur forceps, curette

and drain the abscess. The soft parts should be partially closed. Secondary closure is advocated by some after removal of the drains. This step is most useful when Carrel tubes and Dakinization are used. I am of the opinion that following such an operation a piece of iodoform gauze or rubber tissue offer a satisfactory postoperative drainage and since they are removed after two to four days, insure an early and efficient soft part closure without secondary suturing.

Cure following drainage is the rule. Postoperative complications are indeed rare. Complications in general need little mention. Spontaneous fracture may infrequently be seen where bone destruction is greater than new bone formation. A fall or some sudden violence may break the protecting barrier of sclerosis and allow an acute osteomyelitis to ensue.

#### *Report of Case*

J. D., a colored boy aged 11, complained of severe pain in the upper part of the left thigh since he was eighteen months old. At the time of onset there were also some painful swellings in the left elbow region and the terminal joint of the left index finger. The pain in the latter two locations gradually subsided after about a year with no impairment or return. The boy had suffered measles, chicken-pox, considerable sore throat, and stomach ache in the past. His appetite was never good, and his activities much limited. Indeed, he was confined to his bed for a considerable part of the time. Pain was so severe at times that from twelve to twenty-four, five grain aspirin tablets were taken daily (24 hours) to give relief.

At the onset there was fever which gradually subsided after three or four weeks only to return again a few days before operation. This child, despite the fact that he as well as his mother and father all had negative Wassermanns, had received anti-leucic treatment over a period of three or more years with no beneficial results. When first seen, in August 1933, there was a fever of 99.4 degrees, a white blood count of 13,500 with polymorphonuclears 66 per cent, small lymphocytes 24 per cent, large lymphocytes 9 per cent, basophiles 1 per cent.

There was considerable swelling, more noticeable anteriorly, of the upper one-third of the left thigh. This area was tender and was the site of the patient's pain. Percussion over this swelling was productive of excruciating pain. There was little or no joint stiffening but the boy walked with a slight limp. There were no other significant findings. At this time a roentgen ray examination was made which I will show along with other plates made in May 1929 by the physician in charge at that time.

On August 16, 1933, he was admitted to St. Luke's hospital for colored with a diagnosis of Brodie's ab-

scuss. The following morning under ether anesthesia the abscess cavity was cut down upon, the soft parts being separated by blunt dissection. The abscess was opened and curetted and a piece of iodoform gauze placed lightly in the bone cavity. The soft parts were closed in layers except for a space large enough to accommodate the gauze drainage which was removed or shortened daily until complete removal on the fourth postoperative day.

He ran a mildly febrile course for a few days after operation and then his temperature came down to normal. His pain was absolutely relieved and he was discharged as well on the ninth postoperative day. Several office visits have been made since his operation and so far the cure has remained permanent. He has gained fifteen pounds in weight in the past seven months and has had no pain whatsoever. He can play, walk, run, or work as the occasion demands as well as any other normal child.

#### *Conclusions*

1. Brodie's abscess is usually due to a staphylococcus infection located most likely in the cancellous tissue of the metaphysis of the long bones but may be situated in the medullary region and indeed may be seen in flat bones.

2. In any illness of a chronic nature characterized by boring remittent pain over the extremities of bones, Brodie's abscess should be thought of and considered in a differential diagnosis.

3. The roentgen ray is the most important aid in diagnosis.

4. The treatment is surgical drainage which is productive of most gratifying results to both patient and surgeon in a vast majority of cases.

I am greatly indebted to Dr. A. R. Rozar for the privilege of assisting with the treatment of this private patient of his, and for his generous aid in securing sufficient literature through the American College of Surgeons for preparation of this paper.

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## POSTERIOR VAGINAL HERNIA†\*

*Report of Two Cases*

J. HARRIS DEW, M.D.  
*Atlanta*

Posterior vaginal hernia, or a herniation of the cul-de-sac of Douglas between the posterior vaginal and the anterior rectal walls, is a relatively infrequent condition. It is often overlooked or mistaken for a rectocele, either because it is not anticipated or because a proper preoperative examination is not made. Garengot<sup>1</sup> probably reported the first case in the latter part of the 18th century. In 1804 Sir Astley Cooper<sup>2</sup> published an account of a post-mortem examination in which a posterior vaginal hernia was found. Taylor<sup>4</sup> in 1831 and Bernard in 1846 each reported a case. Baker<sup>3</sup> in 1876 reviewed four cases in which no operation was performed. Gunz in 1879 reported two cases, in which incorrect diagnoses were made. One was thought to be a uterine polyp and a portion of the transverse colon and omentum with the sac was excised. The other hernia was diagnosed as a vaginal cyst and a trocar aspiration caused a fatal peritonitis. A case was described by Thomas<sup>5</sup> in 1885 with a review of the literature. Huguier of Paris in 1912 reported a case and the following year Lothrop of Boston added another, the former describing the operative technique from below, and the latter using the abdominal approach, which seems an unduly radical procedure. Operative technique has been detailed in practically all subsequent articles, most authors modifying Moschowitz's<sup>6</sup> original method.

Hartman of Paris reported a typical case in 1916 and described the operative technique he employed in the repair. Sweetser in 1919 reported a case in a nullipara and advanced the theory that the increasing tension of encysted fluid in the cul-de-sac might be a causative factor in the origin of a hernia. Ward<sup>9</sup> in 1922 outlined his technique for repair by the vaginal route. In 1926 Miles<sup>8</sup> reviewed

all the literature, including nine proven examples of posterior vaginal hernia and added two personal cases. Later Masson and Simon<sup>10</sup> reported five cases from the Mayo Clinic. Baurmann<sup>11</sup> has reported three cases. There have doubtless been many other cases which were recognized but not reported.

*Report of Cases*

CASE 1.—Mrs. J. J., 56 years of age, was first admitted to the New York Post-Graduate Hospital in May 1925, complaining of swelling of legs, weakness, and a loss of 25 pounds in the past five months. Physical examination revealed an irregular mass in the upper quadrant of the abdomen. Exploratory laparotomy revealed cirrhosis of the liver with ascites. Biopsy of the liver showed atrophic cirrhosis. This patient was not seen again until she was re-admitted on the medical service in November 1931. For six weeks prior to this admission she had suffered a constant dull aching pain in right upper quadrant of the abdomen, radiating to her back. She also complained of swelling of the feet, and frequency of urination. The abdomen, which had been enlarged for several years, had definitely increased in size during the past two weeks. Physical examination at this time revealed a prominent abdomen with a fluid wave, shifting dullness and an enlarged, tender liver. She also had a right indirect inguinal hernia and the veins of the abdomen were dilated. There was edema of the ankles and marked arteriosclerosis.

Pelvic examination showed a lacerated perineum with a large protrusion of the posterior vaginal wall at the vulva which appeared to be rectocele in the lower half and an enterocele in the upper half. The patient was treated with salyrgan, ammonium chloride and restriction of fluids. She improved and was discharged December 10, 1931 after 23 days of treatment. Since she was regarded as a poor operative risk for pelvic repair, she was treated in the Gynecological Clinic. A pessary was inserted but this did not prove satisfactory. The patient returned and demanded an operation. She was re-admitted on November 10, 1932, on Dr. Dannreuther's Service at the New York Post-Graduate Hospital, complaining that the protruding mass in the vagina had become progressively larger during the past few years, and that it increased in size on coughing and when straining at stool. For the previous two years she had suffered incontinence of urine when in the erect posture, with frequency of urination and nocturia every hour, the latter preventing her from getting a sufficient amount of rest and sleep. Menstruation had been normal until the menopause eleven years ago. There was no abnormal bleeding. She had had five pregnancies, all easy deliveries, the last one 34 years ago.

Examination revealed a Jewish female, about sixty years of age, not acutely ill. The positive findings were an icteric tinge to the skin and sclera, the stumps of four badly infected teeth, unusually severe arteriosclerosis, heart slightly enlarged to the left with a

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 \*Read before the Fulton County Medical Society, Atlanta, July 19, 1934.

systolic murmur at the apex, a moderate amount of ascites with a shifting dullness and a fluid wave, slightly dilated veins on the abdominal wall, an old right rectus scar, a right indirect inguinal hernia, and slight edema of the ankles. Pelvic examination revealed a huge protrusion of the posterior vaginal vault at the vaginal introitus, a second degree laceration of the perineum, and a small atrophic cervix but no cystocele. With one finger in the rectum it could be seen that the protruding mass was composed of a rectocele in its lower half and an enterocele in the upper half. The uterus was small. Cystoscopic examination showed chronic cystitis cystica in the region of the trigone, subacute cystitis, a distorted bladder and a false saccululation of the lateral and posterior walls.

Laboratory examinations showed erythrocytes 3,400,000, hemoglobin 69 per cent, leucocytes 6,250, polymorphonuclears 60 per cent. Blood chemistry showed urea 8.3, sugar 0.110, cholesterol 0.210, icterus index 30.0, Fouchet-1, direct Vandenberg negative. The urine was negative. Galactose tolerance test: galactose excreted in urine, Vol. (250cc.) in 5 hours yielded 0.17 gm.

She was operated upon under spinal anaesthesia. The largest part of the tumor-like protuberance consisted of thinned out peritoneum which had previously constituted the cul-de-sac and was considerably distended by straw colored fluid, about eight ounces being evacuated on opening the sac. After free mobilization of the sac, its base was clamped, the sac excised and its base overcast with a continuous lock suture. The rectum was then plicated. The suture which had been utilized to close the hernia was left long, and used to fix the base of the sac in the pelvic fascia and to the posterior wall of the cervix. The operation was completed by a typical perineorrhaphy. The patient withstood the operation remarkably well. Convalescence was normal except for a rapid return of ascites, more marked than before operation, and increasing edema of ankles.

As the operative field healed well and the hernia was apparently cured, on the eighth post-operative day she was transferred to the medical service where she was given a high carbohydrate, low protein, low fat, salt free diet, salyrgan and ammonium chloride. The patient showed improvement for eighteen days. On December 7, 1932 at 10 a.m. she vomited 200 cc. of blood and continued to vomit blood throughout the day. Her condition became critical, her blood pressure dropped to 54/40 at 5:30 p.m. As a last resort she was given a transfusion of 750 cc. of whole blood. She died at 9:30 p.m.

An autopsy was performed which revealed a rupture of an esophageal varix with massive hemorrhage; atrophic (portal) cirrhosis of the liver; chronic hepatitis; hypoplasia and fibrosis of the spleen; ascites; chronic fibrous peritonitis and hemorrhoids. There was also generalized arteriosclerosis; coronary sclerosis; fibrosis and degeneration of the myocardium; calcificos of the aortic and mitral valves; granular degeneration of the kidneys; pulmonary fibrosis; chronic bilateral

fibrous pleuritis (adhesions); left pulmonary effusion; congestion and granular degeneration of the adrenal gland and edema of the legs.

The average time from the onset of a definite portal cirrhosis until death is accepted by most observers as about two years. This patient lived seven years.

CASE 2.—Mrs. M. T., a multipara, 38 years of age, was admitted to the New York Post-Graduate Hospital on February 7, 1933, with chief complaints of metrorrhagia and a bulging at the vagina. The family history was negative. Her menstruation began at the age of fourteen, with intervals of twenty-eight days, duration from four to five days and was of moderate amount. She was always regular until the period which was due November 24, 1932, which was two weeks late. She began menstruating on December 6, 1932, since which time menorrhagia had continued to date (February 7, 1933), at times profuse with clots. No products of conception had been identified.

She had had four pregnancies, the first twelve years ago, a face presentation. She was in labor five days with hard pains. She stated that the baby was delivered as a face presentation without instruments, followed by a post-partum hemorrhage. Her second pregnancy was eleven years ago, a three and one-half pound baby without complications. The third pregnancy was seven years ago, a normal delivery of twins. She was in labor twelve hours and again had a post-partum hemorrhage.

Three years ago as she lifted the end of her ill husband's bed she felt a sudden severe pain in the lower back. She was seen by a physician who told her that her condition was due to a laceration. He prescribed and inserted a pessary. This was never satisfactory and the bulge from the vagina gradually increased in size. During the past year she had suffered constipation with difficulty in defecation and a definite increase in the size of the bulge from the vagina when straining at stool. During the past few months there was difficulty in walking, due to the size of the hernia, and she had been wearing a tight vulvar pad. For three years she had experienced sacral backache and a dull pain across the lower abdomen.

Physical examination revealed a lacerated perineum with a wide diastasis of the levator muscles and a large rectocele, above which a hernia of moderate size was noted on coughing. The anterior vaginal wall was fair but the cervix was bilaterally lacerated, slightly soft, the external os admitting the tip of the index finger. The uterus was uniformly enlarged, slightly soft, in second degree retroversion, but replaceable. The fallopian tubes and ovaries were normal.

At operation curettage revealed an incomplete abortion. On separation of the posterior vaginal wall a definite sac was found protruding behind the cervix and in front of the rectum. This was continuous with the cul-de-sac of Douglas, lined with peritoneum, and measured six by eight centimeters in size. The sac was dissected free by blunt and sharp dissection. It was excised and the edges of peritoneum sutured.



The hernial opening was closed by placing sutures through the posterior portion of the cardinal ligaments and the recto-vaginal fascia with a purse string suture on each side of the cervix. One suture entirely closed the opening. Ward's rectopexy stitch was utilized and the recto-vaginal fascia and margins of vaginal wall were sutured together. The levator muscles and triangular ligaments were approximated with two interrupted sutures. A subcutaneous suture was used for the perineum.

The pathological report was pregnancy with acute purulent and necrotizing inflammation of the endometrium and fetal membranes. A congested hernia-like sac.

The patient made an uneventful recovery with an excellent anatomic result. When seen three months later in the gynecological follow-up clinic the end result was found to be satisfactory.

### *Anatomical Considerations*

Since the cul-de-sac of Douglas is the most dependent portion of the peritoneal cavity, it would seem logical that it should be the most common site for a hernia. Although the posterior type of vaginal hernia is sixteen times as frequent as the anterior variety, in relation to the total number of herniae, it is an unusual lesion for the following reasons. First, due to the obliquity of the pelvic cavity, intra-abdominal pressure is deflected forward when the individual is in the erect position. In addition, the mesentery affords considerable support to the intestine. The accessory ligaments help to relieve the strain on the parametrium. Blaisdell has demonstrated that considerable muscle tissue exists under the peritoneal folds of the cul-de-sac of Douglas. The true support of the pelvic structures are the muscles and especially their fascial coverings.

The cardinal part of the pelvic fascia is a strong band of fibrous tissue called the arcus tendineus, which runs from the symphysis upward and backward along the lines of the anterior fornices of the vagina to a point near the spine of the ischium. Along this line the pelvic fascia divides to form the fascia endopelvina, which supports the bladder in front, the cervix medially, and the rectum posteriorly. Posteriorly the utero-sacral ligaments extend in fan shape from the cervix around the rectum and are attached to the fascia of the sacrum.

The plicovaginal ligaments first described by Blaisdell are lines of fascia that curve

downward from the utero-sacral ligaments along the sides of the cul-de-sac of Douglas to end in the fascia of the vaginal vault. These ligaments are extremely important, for they not only support the vaginal vault and rectum, but strengthen the cul-de-sac.

### *Etiology*

In a consideration of the causative factors posterior vaginal hernia, perhaps the most important one is stretching or separation of the fibers of the fascia during pregnancy, labor, and delivery. Other contributing factors are subinvolution of the uterus during the puerperium, especially if it is retrodisplaced, preventing proper involution of the pelvic fascia; a congenital absence of certain layers of fascia, such as the plicovaginal ligaments etc., and a congenitally deep cul-de-sac of Douglas, for Freund and others have proved that in the fetus the cul-de-sac reaches to the levator muscles. Normally its depth gradually decreases until puberty when it reaches the level of the second or third sacral vertebra, but this change may not occur.

Ascites undoubtedly is a contributing, if not a definite causative factor in some cases. In the erect posture there is no question but that ascitic fluid will exert a positive pressure in the cul-de-sac. This must have been true in the case in which the patient had ascites for several years. There are three other cases on record in which the patients had definite ascites. Sweetzer reported an instance in a nullipara. Miles reported two patients with ascites, one due to an ovarian cyst and the other to cirrhosis of the liver. In the latter there was a disappearance of the posterior vaginal hernia following paracentesis. In these cases there evidently must have existed a congenital or traumatic defect, since ascitis is so frequently seen without a posterior vaginal hernia.

### *Diagnosis*

Judging from the number of times patients have been subjected to repeated operations for a supposedly recurrent rectocele before the actual condition of posterior vaginal hernia was recognized, it is evident that a correct diagnosis is not often made.

The symptoms are few and indefinite. Usually the patient complains of a mass bulging into the vagina or protruding beyond the

vaginal orifice, which is exaggerated when in the erect posture. It increases in size on coughing or straining or with any increase in intra-abdominal pressure. It usually disappears when the patient lies down. The symptoms causing the patient to seek relief may be due entirely to concomitant conditions, such as rectocele, cystocele, and procidentia. The diagnosis is not difficult as a rule, and can be established by merely introducing the examining finger into the rectum and having the patient strain or cough, which discloses that the bulging mass is outside of the rectal wall. When this condition is accompanied by a rectocele, as it frequently is, one can see that the rectocele makes up only a portion of the mass.

The case reports in the literature suggest that the diagnosis is not frequently made until the sac is exposed by elevation of the posterior vaginal flap at operation. When the mass is large and contains a portion of the small gut, visible peristaltic waves can be aroused by irritating the sac and manual replacement of the mass is accompanied by a gurgling sound. It was impossible to demonstrate these two latter signs in the two cases reported above.

In differential diagnosis, vaginal cysts must be considered. This should be simple enough, except, as Miles has pointed out, cysts of the ampulla of Gartner's ducts might cause some confusion.

The diagnosis will seldom be missed if the possibility of a posterior vaginal hernia is considered and rectal examination made in every case of rectocele.

#### *Summary and Treatment*

The first case just reported is interesting because of the presence of a posterior vaginal hernia, and also the associated cirrhosis of the liver with ascites of seven years duration. Theoretically, the hydrostatic pressure from fluid in the cul-de-sac over a long period of time will at least increase the size if not be a factor in the production of a posterior vaginal hernia.

The operation of choice used by most surgeons is the vaginal approach, with isolation, transfixion, ligation, and excision of the sac, and closure of the space between the rectum and the vagina. We frequently utilize the recto-vaginal fascia and utero-sacral ligaments, using purse string sutures, and supple-

menting these measures with a high perineorrhaphy.

If there is some other indication for abdominal incision, the cul-de-sac of Douglas may be obliterated by a series of purse string sutures passed through the anterior rectal wall, utero-sacral ligaments, and uterus. Operation is always essential for cure.

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#### MINUTES OF MEDICAL ASSOCIATION OF GEORGIA

##### HOUSE OF DELEGATES

(Continued From the August Issue of the Journal)

*Friday Morning, May 11, 1934*

The meeting convened at 8:35 o'clock, President Richardson presiding.

*President Richardson:* The House of Delegates will please come to order.

The following members responded to the roll call: Charles H. Richardson, Macon, President.

Clarence L. Ayers, Toccoa, President-Elect.

Allen H. Bunce, Atlanta, Secretary-Treasurer.

John W. Simmons, Brunswick, Parliamentarian.

William H. Myers, Savannah, Delegate to A.M.A.

Olin H. Weaver, Macon, Delegate to the A.M.A.

J. A. Redfearn, Albany, Chairman of Council.

C. Thompson, Millen, Councilor, First District.

Kenneth S. Hunt, Griffin, Councilor, Fourth District.

W. A. Selman, Atlanta, Councilor, Fifth District.

H. G. Weaver, Macon, Councilor, Sixth District.

J. E. Penland, Waycross, Councilor, Eighth District.

Grady N. Coker, Canton, Councilor, Ninth District.

Frank K. Boland, Atlanta, Chairman of Committee on Medical Defense.

J. L. Campbell, Atlanta, Chairman of Cancer Commission.

Arthur G. Fort, Atlanta, Fraternal Delegate to visit Florida.

J. M. Smith, Valdosta, Fraternal Delegate to visit Florida.



<i>Counties</i>	<i>Delegates</i>
Bibb	Charles C. Harrold, Macon J. D. Applewhite, Macon
Cherokee	D. H. Garrison, Tate
Cobb	R. W. Fowler, Marietta
Colquitt	C. C. Brannen, Moultrie
Decatur-Seminole	R. F. Wheat, Bainbridge
Fulton	B. T. Beasley, Atlanta, Alternate M. T. Benson, Atlanta J. J. Clark, Atlanta Geo. W. Fuller, Atlanta, Alternate M. C. Pruitt, Atlanta C. W. Roberts, Atlanta
Hall	B. B. Davis, Gainesville
Jefferson	S. T. R. Revell, Louisville
Lowndes	H. M. Tolleson, Hahira
Randolph	W. G. Elliott, Cuthbert
Richmond	A. A. Davidson, Augusta George A. Traylor, Augusta
Spalding	Marvin M. Head, Zebulon
Thomas	C. H. Watt, Thomasville
Ware	W. F. Reavis, Waycross
Washington	N. J. Newsom, Sandersville

W. D. Gholston, Delegate, Danielsville, Georgia.

V. O. Harvard, Arabi, Ex-President.  
J. O. Elrod, Forsyth, Ex-President.  
William R. Dancy, Savannah, Ex-President.  
C. K. Sharp, Arlington, Ex-President.  
W. S. Goldsmith, Atlanta, Ex-President.  
Thomas J. McArthur, Cordele, Ex-President.  
W. A. Mulherin, Augusta, Ex-President.

The minutes were read and adopted.

*Dr. Garnett W. Quillian (Atlanta):* Mr. Chairman and Delegates: This is a report of the Committee cooperating with the Chamber of Commerce of Jefferson, Georgia, to place a bronze statue of Crawford W. Long in the Public Square of that city.

#### *Crawford W. Long Bronze Statue*

*Report of Committee cooperating with the Chamber of Commerce of Jefferson, Ga., to place a Bronze Statue of Crawford W. Long in the Public Square of that city.*

In response to a request from Mr. W. H. Smith President of the Chamber of Commerce of Jefferson, Ga., on June 4th, 1933, Dr. George Noble and your chairman met in Jefferson with Dr. J. C. Bennett, Mr. W. H. Smith and a group of leading citizens of Jefferson for an informal discussion of the above designated proposed plan.

Dr. Noble who had previously been designated as sculptor, stated that the bronze statue could be erected at a cost of approximately \$3,000.

Your chairman suggested that if Jefferson would contribute \$1,000 of this amount, that the committee would undertake to raise the other \$2,000, by subscriptions from the medical profession in the state. The suggestion was made by Dr. Bennett that since the country was in the midst of an unprecedented depression, and that since there was no haste necessary, that no action be taken at that time.

Dr. Bennett has since passed away.

Your committee is therefore compelled to report no progress. Since the conference above referred to, and on reflection, your chairman feels that since the proposed statue is to be placed in the public square of Jefferson, a more equitable division of the sum to be raised would be for Jefferson to contribute \$2,500, and for the medical profession to contribute \$500.

If this committee is continued, we would request that some one to take the place of Dr. Bennett be appointed. Your further advice will be awaited.

GARNETT W. QUILLIAN, *Chairman*

*President Richardson:* The Committee's report will be accepted as information and the Committee continued. I do not think that requires any action of this body at this time.

#### *Cancer Commission*

The next committee I shall ask to report is the Cancer Commission. The Cancer Commission filed its report, as you know, on Tuesday afternoon, and it was referred back to the Cancer Commission for further study, with a request that they come in with a more complete report this morning.

*Dr. J. L. Campbell (Atlanta):* Mr. President and Members: A number of members of the Cancer Commission met night before last, and I think there were five present, and various reports were discussed. I stated that I would render this report. There was no formal action taken, nobody signed any report, and so I am rendering this as a supplement or as an amendment to my report that I read at the first meeting of the House of Delegates:

"WHEREAS, On March 5, 1934, the following telegram was sent to Dr. Olin West, Secretary, American Medical Association:

" 'For several years the American Society for the Control of Cancer has failed to cooperate with the Medical Association of Georgia through its Cancer Commission in educational work. Instead it has apparently deliberately created discord and thereby hindered our own work. Specifically without our knowledge or consent it placed on roadside billboards through the State educational posters giving the address of a local cancer clinic which at that time was receiving both charity and pay patients. It kept as its chairman in Georgia for several years a physician who is not now a member of our Association and who was objectionable to at least ninety per cent of the members of our local society. It set itself up as a referee to tell patients where to obtain treatment for cancer or suspected cancer. So long as it continues these practices the Medical Association of Georgia strenuously and vigorously opposes any exhibit or demonstration by this Society at any of the sessions of the American Medical Association.'

"I wish to state that this telegram was sent on my own authority without consulting the President of the Medical Association of Georgia or any member of the State Medical Association Cancer Commission, of which I am Chairman."

(A general discussion followed).

*Dr. W. S. Goldsmith:* Why can't we settle this question now, and act as a committee of the whole?

*Dr. Charles C. Harrold (Macon):* I move that we go into a committee of the whole for discussion.

*Dr. Goldsmith:* I second the motion.

*Chairman Applewhite:* You have heard this motion by Dr. Harrold, seconded by Dr. Goldsmith. Those in favor say "aye"; opposed "no". The motion is carried.

The House of Delegates went into the committee of the whole, and discussed Dr. Campbell's report. It was moved by Dr. William R. Dancy, Savannah, seconded by several, put to a vote and carried, that the members endorse the action of Dr. Campbell, Chairman of the Cancer Commission, for the reasons stated in his explanation to the House in this session.

It was moved by Dr. Olin H. Weaver, Macon, seconded by Dr. J. O. Elrod, Forsyth, put to a vote and carried, that the committee of the whole be dissolved, and that the House of Delegates resume its session.

*Dr. R. L. Miller (Waynesboro):* I move that the resolution that Dr. Dancy offered to the committee of the whole be adopted by the House of Delegates.

*Dr. M. C. Pruitt (Atlanta):* I second the motion.

*Chairman Applewhite:* You have heard the motion. As many as favor this signify by saying "aye"; opposed "no." The motion is carried.

President Richardson resumed the chair.

#### *Woman's Auxiliary—Report*

*President Richardson:* Gentlemen of the House of Delegates: We are honored this morning by the presence of the President of the Woman's Auxiliary of the Medical Association of Georgia, who wishes to make her annual report to the House of Delegates, and we will be very glad to hear from Mrs. J. Bonar White at this time.

The audience arose and applauded.

Mrs. J. Bonar White read her report (Paper No. 16).

The audience arose and applauded.

*Dr. W. S. Goldsmith:* I move that this splendid and very beautiful report of Mrs. White be adopted by a standing vote.

The audience arose and applauded.

*Dr. R. L. Miller (Waynesboro):* At the suggestion of the Chairman of the Cancer Commission, I move that the incoming President appoint a representative of the Woman's Auxiliary on the Cancer Commission, preferably Mrs. White, in addition to the one already on the Commission.

*Dr. William R. Dancy (Savannah):* I second the motion.

*President Richardson:* It is moved and seconded that the incoming President be requested to appoint a woman from the Auxiliary on the Cancer Commission of Georgia, and that the motion suggest the name of Mrs. J. Bonar White of Atlanta. Is there any discussion? If not, those in favor of the motion say "aye" opposed "no." The motion is carried.

*Dr. B. H. Minchew (Waycross):* Mrs. White's report of the wonderful work she has done this year,

showing the great work the Auxiliary has done since its organization, convinces the members of the Medical Association of Georgia, I am sure, that we had been lacking, up to the time of the organization of the Auxiliary, the great help that may be had from our wives and their interest in the things we have to do. The organization was effected about eight or ten years ago, and her report this morning was a revelation to me. I felt all the while that they would accomplish great things. I thought, however, that it might be largely a social organization, but we have been shown here this morning that probably Mrs. White and the Woman's Auxiliary have done more this year to carry forward the gospel of health than the Medical Association of Georgia has with any of its committees or all of its committees. They have done that by making contact with lay people. They have done that by their resourcefulness and the arduous work of Mrs. White and the women connected with the organization.

*President Richardson:* The next thing under reports of committees will be the report of the Reference Committee. I believe it would save time to act on the report paragraph by paragraph.

#### *Reference Committee*

*Dr. C. W. Roberts:* The report is as follows:

"Your Committee wishes to express the thanks of this House of Delegates to the President for his interesting and thought-provoking report.

#### *Medical Economics In Georgia*

"Dr. Richardson quite properly, we think, suggests that certain scientific data and research should be sought as a basis for attack upon the problems of medical economics in Georgia. Your Committee, therefore, wishes to recommend that this House of Delegates approve the suggestion made by Dr. Richardson that an economic survey of Georgia be made; that this survey be made under the direction of the Committee on Medical Economics and Public Relations of the Association. Your Committee further suggests that this House instruct the Committee on Economics and Public Relations to enter into negotiations with representatives of the Federal Government, jurisdiction of Georgia, in an effort to secure an appropriation to cover the costs of such a survey. At their discretion the advice and counsel of the State Board of Health of Georgia may be sought."

*Dr. Marvin M. Head (Zebulon):* I move its adoption.

*Dr. Kenneth S. Hunt (Griffin):* I second the motion.

*President Richardson:* Is there any discussion? Those in favor say "aye"; opposed "no." The motion is carried.

#### *Past Presidents*

*Dr. Roberts:* "Your Committee commends the motive prompting our President in his suggestions that the Past Presidents of this Association be given additional incentive for the exercise of their wise counsel and experience after passing through the office of President. We recommend, therefore, that a Committee be created to be known as the 'Honorary Advisory Board of the Medical Association of Georgia,' that it consist of all living past Presidents of the Association,



that their tenure of office be for life, and that their duties be of advisory nature to the Council of this Association."

*Dr. W. A. Selman (Atlanta):* I move its adoption.

*Dr. H. G. Weaver (Macon):* I second the motion.

*President Richardson:* Is there discussion? Those in favor say "aye"; opposed "no." The motion is carried.

#### *Intensive Post-Graduate Study*

*Dr. Roberts:* "Your Committee is in agreement with the suggestion of the President with respect to the need of intensive post-graduate study by the members of our Association. We believe, that such study is of both scientific and economic nature. We, therefore, recommend that it be the sense of the House of Delegates that post-graduate medical education in Georgia, so far as it is not by nature under the control of the medical schools of the state, be directed and supervised by the Medical Association of Georgia. To that end, your Committee recommends that this question be referred for further study to the Committee on Medical Economics and Public Relations of our Association; that this Committee be instructed to plan a course of post-graduate medical education for this state, and that they investigate the feasibility of obtaining financial support from the Commonwealth Fund for the prosecution of such post-graduate study as may be finally approved by the Medical Association of Georgia."

*Dr. Miller:* I move its adoption.

*Dr. Dancy:* I second the motion.

*President Richardson:* Is there discussion? Those in favor say "aye"; opposed "no." The motion is carried.

#### *Fraternal Delegates*

*Dr. Roberts:* "With respect to the question of continuing the exchange of fraternal delegates with neighboring state associations, your Committee recommends that the scope and extent of such exchange be left to the discretion of the President of the Association, and that in the event of the appointment of such delegates, their expenses be borne personally in the future, as they have been in the past."

*Dr. Elrod:* I move its adoption.

*Dr. Myers:* I second the motion.

*President Richardson:* Is there discussion? Those in favor say "aye"; opposed "no." The motion is carried.

#### *Election of Officers*

*Dr. Roberts:* "Your Committee agrees in principle with the suggestion that efficiency would be prompted by the nomination and election of the officers of our Association by the House of Delegates. Notwithstanding the democracy of this procedure, and the precedent set by its use in the House of Delegates of the American Medical Association, your Committee believes that the proposed adoption of the procedure in Georgia would raise a highly controversial question. We recommend, therefore, that a Committee be appointed to draft the necessary proposed changes in our Constitution and By-laws, and that the question be debated during the coming year by our component societies to the end that the wishes of our membership may

be registered when the question finally reaches this floor for final consideration."

*Dr. Mulherin:* I move its adoption.

*Dr. Revell:* I second the motion.

*President Richardson:* Is there discussion? Those in favor say "aye"; opposed "no." The motion is carried.

#### *Dates of District Meetings*

*Dr. Roberts:* "Your Committee has noted with interest the suggestion in the report of President-elect Ayers, with respect to conflicting dates for meetings of the various district societies. Your Committee recommends that the Secretary of the Medical Association of Georgia be requested to correspond with the Secretaries of these various societies in an effort to work out a schedule which will eliminate conflicting dates."

*Dr. Elrod:* I move its adoption.

*Dr. Myers:* I second the motion.

*President Richardson:* Is there discussion? Those in favor say "aye"; opposed "no." The motion is carried.

#### *By-Laws; Proposed Amendment—Membership*

"Your Committee suggests that the Constitution and By-laws be amended substantially as follows:

"That any physician applying for membership in a component medical society of this Association, who has previously practiced in a county in which affiliation with a component society is provided, and who moves to another county without having affiliated with the medical society in the jurisdiction of previous resident, that before he is admitted to membership, the cause for his lack of affiliation in the society of his previous residence be ascertained."

*Dr. Elrod:* I move its adoption.

*Dr. Roberts:* The force of that becomes apparent to the members of the House, I am sure, that it imposes upon the Board of Censors the duty of corresponding with the society of the previous residence to ascertain why this man was not a member of the society when he left that county.

*Dr. Hunt:* I second the motion.

*President Richardson:* Is there discussion? Those in favor say "aye"; opposed "no." The motion is carried.

#### *Meetings of the House of Delegates*

*Dr. Roberts:* "Your Committee recognizes the reasonable grounds upon which our Parliamentarian suggested in his report that future meetings of this House of Delegates, provided it can be arranged, be set during the days heretofore allotted to its scientific sessions. We, therefore, recommend that it be the sense of this House of Delegates that changes in future meetings of the House be made in keeping with the Parliamentarian's suggestions, provided such changes be not in conflict with the Constitution and By-laws of our Association, and provided such meetings may be arranged so as not to interfere with the regular scientific sessions of the Association, except by approval of the Committee on Scientific Work."

It was regularly moved and seconded to adopt that portion of the Committee's report.

*Secretary Bunce:* I like the idea, but in Chapter III of the By-laws it says "The House of Delegates

shall meet on the day preceding the first day of the annual session, the time to be fixed by the Committee on Scientific Work."

*Dr. Reavis:* There will be an amendment introduced at this session on that.

*President Richardson:* We will skip that at the present time, then.

#### *F. E. R. A.—Medical Service-Mileage*

*Dr. Roberts:* "Miss Gay B. Shepperson, Relief Administrator for Georgia, of the Federal Emergency Relief Administration, has filed with the Secretary-Treasurer a report setting out a schedule of moneys paid in Georgia from July, 1933, to March, 1934, inclusive, for medical and nursing services and for medical supplies, under the regulations of the Administration for Medical Relief Services to those on the relief rolls of Georgia. The total paid for medical fees and supplies during this period was \$197,843.23. There was an additional payment of over \$50,000 during this period for bedside nursing service.

"Miss Shepperson's report exhibits a desire upon the part of the Administration in Georgia to cooperate with the Medical Association of Georgia in the correction of certain abuses which have arisen in the administration of these regulations in Georgia. Her report contains a suggestion that a committee be appointed from the State Association to meet with members of the executive staff of the Relief Administration in Georgia for the purpose of discussing these abuses. Miss Shepperson believes that by mutual understanding many of these misunderstandings may be eliminated.

"Your Committee therefore recommends that a committee for the above outlined purpose, to consist of the President, Secretary-Treasurer, and the State Commissioner of Health, be appointed. When this committee has agreed upon policies respecting such abuses, as the problem of transportation," (the mileage question) "the definition and classification of major and minor operations, the question of venereal disease treatment, and so forth, they are instructed to report such findings immediately to the Council of the Association, and, acting with the Council, are authorized to put such policies into immediate operation as in their judgment best serves the membership of the Association."

*Dr. Miller:* I move its adoption.

The motion was regularly seconded.

*Dr. Miller:* I introduced a motion that we receive twelve and a half cents per mile. Does this supersede that and do away with it?

*President Richardson:* You have heard the report of the Committee, that a committee be appointed, consisting of the Secretary-Treasurer of the Association, the President of the Association, and the State Commissioner of Health, to confer with the Federal Relief Administration forces in this state, and then, acting in conjunction with the Council, to do such things as may seem best for the Association.

A general discussion on the question of mileage followed.

The question was called for.

*President Richardson:* Is there discussion? Those

in favor say "aye"; opposed "no." The motion is carried. Does anyone care to offer an amendment instructing the committee in any way?

*Dr. Roberts:* "The Secretary-Treasurer is instructed to write Miss Shepperson, expressing the thanks and appreciation of the Medical Association of Georgia for the broad spirit of cooperation with organized medicine, which Miss Shepperson has exercised in her official duties in Georgia."

It was regularly moved and seconded that that portion of the report be adopted.

*President Richardson:* Is there discussion? Those in favor say "aye"; opposed "no." The motion is carried.

*Dr. Roberts:* This report is respectfully submitted by the Committee.

*Dr. Miller:* I move the adoption of the report as a whole.

*Dr. Myers:* I second the motion.

*President Richardson:* Is there discussion? Those in favor say "aye"; opposed "no." The motion is carried.

The Chair wishes to take this occasion to thank the Committee for the careful way in which they have gone into all of these recommendations and reported on them.

The next order of business is the report of the Council, Dr. Redfearn.

#### *Cancer Commission-Insurance Fund*

*Dr. J. A. Redfearn:* Mr. Chairman and Members: The Council submits the following report for consideration:

"FIRST, Dr. Bunce reports there has accumulated about \$230 representing commissions on insurance sales, and he moved that this money be placed at the disposal of the Cancer Commission. The motion was seconded and carried."

*Dr. Elrod:* I move its adoption.

*President Richardson:* We will first have to have a motion to act on this report paragraph by paragraph.

It was regularly moved and seconded that the report be acted on paragraph by paragraph.

*President Richardson:* Is there discussion? Those in favor say "aye"; opposed "no." The motion is carried.

*Dr. Elrod:* I now move the adoption of the first paragraph.

*Dr. Myers:* I second the motion.

*President Richardson:* Is there discussion? Those in favor say "aye"; opposed "no." The motion is carried.

#### *Dues For 1935*

*Dr. Redfearn:* No. 2: "We recommend fixing the 1935 dues at \$6."

It was regularly moved and seconded that that paragraph be adopted.

*President Richardson:* Is there discussion? Those in favor say "aye"; opposed "no." The motion is carried.

#### *Auditing Committee-Report*

*Dr. Redfearn:* No. 3: "The Auditing Committee, Dr. Cleveland Thompson, Chairman, Dr. Hunt and



Dr. Weaver, report Dr. Bunce's books accurately kept and correct in every detail."

It was regularly moved and seconded that that paragraph be adopted.

*President Richardson:* Is there discussion? Those in favor say "aye"; opposed "no." The motion is carried.

#### *Medical Defense*

*Dr. Redfearn:* No. 4: "Dr. W. A. Mulherin was re-elected for a period of five years as a member of the Committee on Medical Defense."

*President Richardson:* No motion is required on that.

*Dr. Redfearn:* No. 5: "Twenty-five hundred dollars, or as much thereof as may be necessary, was appropriated for medical defense."

*Dr. Elrod:* I move its adoption.

*Dr. C. W. Roberts:* I second the motion.

*President Richardson:* Is there discussion? Those in favor say "aye"; opposed "no." The motion is carried.

#### *Cobb County Medical Society-Suspended Members*

*Dr. Redfearn:* No. 6: "The Committee appointed a year ago, consisting of Dr. J. O. Elrod, M. M. McCord and H. M. Fullilove, reported that they had been to Cobb County and endeavored to bring both sides together and made every effort to adjust the differences brought about by the suspension of members for contract practice. This Committee concluded that the suspended members should be reinstated to membership in the Cobb County Society. A motion to adopt the report of the Committee was carried."

It was regularly moved and seconded that that paragraph be adopted.

A general discussion followed.

*Chairman Applewhite:* Those in favor of the adoption of this recommendation please say "aye"; opposed "no." The Chair is in doubt. So many as favor the adoption of the recommendation of the Council please stand; those opposed stand. The noes have it, and I declare the recommendation lost.

#### *Honorarium for President of Auxiliary*

*Dr. Redfearn:* Mr. Chairman and Gentlemen: It is the unanimous opinion of the Council that fifty dollars be given from the Association as an honorarium to Mrs. J. Bonar White.

*Dr. Miller:* I move the adoption.

*Dr. C. Thompson:* I second the motion.

*Chairman Applewhite:* Is there discussion? Those in favor say "aye"; opposed "no." The motion is carried.

#### *History Fund Be Set Aside Or Impounded*

*Dr. Redfearn:* No. 8: "Dr. Bunce moved that a sum equal to the amount paid into the history fund be set aside so that copies of books of the history of the Medical Association of Georgia could be given to doctors who made donations with this understanding, and that it be placed in a savings account, subject to withdrawal at the proper time. Motion carried."

I move the adoption of that paragraph.

*Parliamentarian Simmons:* I second the motion.

*Chairman Applewhite:* Is there discussion? Those

in favor say "aye"; opposed "no." The motion is carried.

*Dr. Redfearn:* That is all, Mr. Chairman.

*Dr. Miller:* I move the adoption of the report as a whole.

*Dr. Revell:* I second the motion.

*Chairman Applewhite:* Is there discussion? Those in favor say "aye"; opposed "no." The motion is carried.

Are there any other committees to report?

#### *Workmen's Compensation-Contract Practice*

*Dr. M. T. Benson (Atlanta):* Your Committee that was appointed to bring in a report on workmen's compensation contract practice wishes to submit the following report.

I do not suppose you want to take time to read it, and I do not know what disposition you want to make of it. I move that it be referred to the Council.

The motion was regularly seconded.

*Chairman Applewhite:* Is there discussion? Those in favor say "aye"; opposed "no." The motion is carried.

Are there any other committees to report? Is there any unfinished business?

#### *Basic Science Bill—Committee On Public Policy and Legislation*

*Dr. Tolleson:* I made a recommendation to be referred to the Committee on Public Policy and Legislation, and apparently this Committee has not considered the question. Therefore, I move that this body instruct our Committee on Public Policy and Legislation to draft a bill to be introduced in the next session of the legislature of Georgia, with regard to the basic science law, and that the details as to the interpretation of which sciences are the basic sciences, and so forth, be left to the discretion of the Committee.

*Chairman Applewhite:* Is there any further discussion. If not, are you ready for the question? Those in favor of the motion say "aye"; opposed "no." The motion is carried.

Is there any other unfinished business? Is there any new business?

#### *Constitution and By-Laws: Proposed Amendments*

*Dr. J. A. Redfearn:* I submit the following proposals for amendments to the Constitution and By-Laws:

CONSTITUTION. Article IX, Section 3. To change the time for the election of officers.

BY-LAWS. Chapter VI, Section 2. To limit the scientific meetings for each annual session to two days, instead of the present three-day session.

1. Originally officers were elected at 3 p. m. on 3rd day of session. Now 12 M.

2. Rapid transit makes it possible to attend two full days and remain away from home only one night.

3. Provision is made for sectional meetings, thus making it possible to read as many papers by holding such meetings one-half day.

4. For years attendance on morning of third day except during election hour has been very poor.

5. Some argue the present set up offers a vacation. Stay an extra day and enjoy it the more.

*Dr. Reavis:* Mr. President and Delegates: I wish to offer these changes in the By-laws of our Association, which will be voted on at the next meeting:

Amend Chapter III, Section 1, of the By-laws, which now reads: "The House of Delegates shall meet on the day preceding the first day of the annual session," etc., by striking therefrom the words, "the day preceding," making such section as so amended to read as follows: "The House of Delegates shall meet on the first day of the annual session," etc.

Also to amend Chapter V, Section 1, of the By-laws, which now reads: "The Council shall meet on the day preceding the annual session," etc., by striking therefrom, in the first line, the words, "the day preceding," and substituting therefor the words, "the first day of." This section as amended to read as follows: "The Council shall meet on the first day of the annual session."

I am offering these, and am not going to take up any time discussing them. I think you are familiar with the fact that we are having one extra day that seems to the majority of the men, I think, unnecessary, and that we can transact the business of this Association on the morning of the first annual day instead of carrying it to a four-day session. It merely cuts out one day.

*Chairman Applewhite:* This does not have to be voted on. It lies over to the next year.

#### *Steiner Clinic—Atlanta*

*Dr. J. J. Clark (Atlanta):* I introduce this resolution: "Whereas, The trustees of the Steiner Clinic Ward of Atlanta are attempting to obtain funds from the national treasury to build and equip a hospital for the treatment of cancer and allied diseases, in direct competition with the physicians and hospitals of Georgia, therefore, be it

"RESOLVED, That it is the sense of this body that we endorse the action of the Fulton County Medical Society in combating the entrance of this organization into the corporate practice of medicine, and that this information be sent to the proper authorities."

I move the adoption of that resolution.

*Dr. Miller:* I second the motion.

*Chairman Applewhite:* Is there any discussion?

The question was called for.

*Chairman Applewhite:* Those in favor of the adoption of the resolution say "aye"; those opposed "no." The motion is carried.

Is there any further new business?

#### *Crawford W. Long—Marquette University School of Medicine*

*Dr. Garnett W. Quillian:* At the request of Mrs. Eugenia Long Harper, I have a matter of new business I should like to present. Yesterday morning, Mrs. Eugenia Long Harper requested that I make this request to the House of Delegates of this Association.

I wish to say this, Mr. Chairman, that true greatness is determined by what one does, the spirit in which one does it, and its usefulness to his fellowman. Gaged by these standards, we all recognize that Crawford W. Long, in discovering ether as an anesthetic in operation, was truly great. Mrs. Frances Long Tay-

lor and Mrs. Eugenia Long Harper, the daughters of Dr. Long, have been very active in keeping ever green the memory of Dr. Long, both in the state of Georgia and nationally, and no longer ago than April 30, 1934, Marquette University presented a certificate to Mrs. Eugenia Long Harper, as the only surviving daughter of Dr. Long, and the verbiage of this certificate is as follows:

#### *Marquette University School of Medicine to CRAWFORD W. LONG*

*"In honor of his discovery of ether anesthesia in 1842 presented posthumously to his daughter, Mrs. Eugenia Long Harper, of Atlanta, Georgia, by the Circle, the Honorary Student Society, of the Medical School."*

Then we come to the point at issue. Mrs. Harper says: "Would it not be a courteous thing for the Medical Association of Georgia to wire thanks to Marquette University Medical School for this distinction which has been accorded to the daughter of Dr. Long?"

*Dr. Miller:* I move that the Secretary of the Association be instructed to write the thanks of the Association.

The motion was regularly seconded.

*Chairman Applewhite:* Is there discussion? Those in favor say "aye"; opposed "no." The motion is carried.

*Dr. Reavis:* Before adjournment, I wish to offer a suggestion. The Ware County Society has presented a cup to this Association, and it is not stated as to the number of men to be appointed on the Committee. That prize is awarded for the man who is doing the best work in the state each year for the eradication of hookworm disease. We suggest that that committee be appointed by the President, as the report said, but that three men be appointed by him to select that particular man.

The meeting adjourned at eleven forty-five o'clock.

ALLEN H. BUNCE, M.D., *Secretary-Treasurer*

#### HEART DISEASE AMONG ADOLESCENT SCHOOL CHILDREN OF NEW YORK CITY

Morris Goodman and Josephine W. Prescott, New York (Journal A. M. A., July 21, 1934), estimate the prevalence of organic heart disease among the adolescent population of New York City at 0.9 per cent. A large number of children with organic heart disease, approximately one third of the total, do not know that they have the disease and are not under medical supervision. The medical facilities of the department of health are entirely inadequate from the point of view of the cardiac child in school. The greater degree of accuracy in cardiac diagnosis rendered possible by the facilities of the diagnostic cardiac clinic has decreased by more than 50 per cent the number of children who are refused working certificates. The correction of this injustice and the systematic procedure to obtain medical supervision for all of those who have organic heart disease have justified the existence of this clinic.



## A FATAL REACTION FOLLOWING ARTIFICIAL PNEUMOTHORAX

JOSEPH C. MASSEE, M.D.

*Atlanta*

Artificial pneumothorax has become unquestionably the most effective surgical procedure in the treatment of pulmonary tuberculosis. The ease of application of this method of treatment has caused it to be widely used. However, simple though the procedure may be from a surgical standpoint, occasional fatal results follow the induction of Pneumothorax. It is to call attention to this possibility that the following case is reported.

### *Case Report*

A married negress, aged twenty-eight years, was admitted to the Atlanta Tuberculosis Association Pneumothorax Clinic on August 4, 1933. Her past and family histories were unimportant, except that she had spent two months at the Tuberculosis Sanatorium at Alto. There it was found that she had far advanced tuberculosis with a partial spontaneous pneumothorax on the left. X-rays showed moderately coarse mottling in the first and second interspace on the left with moderately coarse mottling of the entire right lung, except at the extreme base. Pneumothorax was instituted on the right and continued on the left by weekly refills. She was not subject to dyspnoea and did well.

On admission to the clinic she weighed eighty-nine and one-half pounds, had a temperature of 99 degrees and pulse of 124 per minute. There were numerous crepitant rales heard all over both lungs. Fluoroscopic examination showed about two-thirds collapse of the right upper and middle lobe with one-fourth collapse of the right lower lobe. There were adhesions between the right lower lobe and the diaphragm. On the left there were numerous adhesions, chiefly about the apex. There was one-third collapse of the left lower lobe, but the collapse was irregular, due to adhesions.

A right pneumothorax refill of 600 cubic centimeters of air was given, and one week later 300 cubic centimeters of air were injected into the left pleural space. About three minutes after the injection she went to the dressing room and while there had an attack of syncope with rapid labored respirations lasting several minutes, but from which she quickly recovered.

During the next three months she received refills of air each week, alternating from left to right side, the refills on the left side averaged 190 cubic centimeters and on the right side 240 cubic centimeters per week. At no time was there a positive pressure on either side. During this time she stated that she

felt improved. Her weight remained at ninety pounds but she had no fever and her pulse averaged ninety per minute. On several occasions she complained of feeling dizzy when she leaned over to put on her shoes.

On November 3, 1933, 300 cubic centimeters of air was injected on the left side. After the injection she said she felt well but was asked to lie still for a few moments. In about two minutes she went into a convulsion lasting about one minute, after which no heart beat could be heard, although she breathed convulsively for some time while adrenalin was being prepared for intracardiac injection. She never regained consciousness, but after the injection of adrenalin deeply into the fourth left intercostal space just to the left of the sternum there was some transitory action of the heart. Respirations then ceased. A needle was introduced into the left pleural space but no evidence of positive air pressure was obtained. Artificial respiration was employed until an inhalator was obtained but she never breathed spontaneously again. Unfortunately, an autopsy was not obtained.

### *Comment*

There have been many theories advanced as to the cause of death in pneumothorax. Early views considered this phenomenon in the nature of a nervous reflex. Hence such terms as pleural reflex, pleural shock, pleural epilepsy and pleural eclampsia. Mediastinal flutter may be an occasional cause, but in our case the many adhesions of the lung to the chest wall probably prevented that. More often the condition seems to be one of air embolism. Ischemia of half of the tongue, and air embolism of retinal vessels have been observed in such cases. Due to the definite asymptomatic interval between the injection of air and the loss of consciousness in our case, the latter mechanism seems most likely.

### ELECTROSPRGICAL OBLITERATION OF THE GALLBLADDER (SEVENTY-FIVE CONSECUTIVE, UNSOLICITED, CASES WITHUOT MORTALITY)

Max Thorek, Chicago (Journal A. M. A., July 21, 1934), states that failures and fatalities in classic cholecystectomy are frequently due to bile leakage, as a result of an inability to obliterate and cover the gallbladder bed, which contains bile capillaries and often larger bile ducts, in from 15 to 25 per cent of cases. Drains invite bile seepage. A method is described which effectually seals these openings by electrocoagulation. A sterile, hyaline, dry protective layer is substituted for a raw, unprotected surface. The falciform ligament is superimposed over this area. Drainage is sentirely omitted. A series of seventy-five consecutive, unsolicited cases were thus treated without a fatality.

\*Read before the Medical Association of Georgia, Augusta, Georgia, May 9, 1934.

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## THE TREATMENT OF AMEBIASIS

During the past few years there has been a steady increase in the number of cases of amebiasis in this country. The disease is being encountered in all sections of the country. Of particular interest to the doctors in Georgia is the survey being conducted in Bethlehem Georgia, in Barrow County by the Division of Epidemiology of the Georgia Department of Public Health.<sup>1</sup> Out of 150 persons examined thus far the cysts of *Entameba histolytica* were found in 18 per cent. In private practice in Georgia the physicians are seeing cases regularly. This increase in the number of cases recognized is no doubt due to a more careful clinical and laboratory examination of the patients complaining of diarrhea.

Due to the number of drugs introduced for the treatment of amebiasis during the past few years some confusion has arisen as to the best methods of eradicating the infection. The wide variety of chemicals suggested and the frequent disappointments of treatment seem to justify a review of recent literature on this subject. The compounds so far proposed for treatment may be grouped as follows: 1. The alkaloid of ipecac, emetine hydrochloride; 2. organic arsenicals such as stovarsol and carbarsone; 3. the halogenated oxyquinoline derivatives such as vioform, ciniofon, and anayodin; 4. miscellaneous anti-septics such as bismuth, kerosene and other enemas.

Leake<sup>2</sup> has called attention to the fact that amebiasis, like syphilis is a protozoan infection in which a variety of unrelated chemicals have some effectiveness but no single remedy has proved completely satisfactory as a therapeutic agent.

Emetine hydrochloride has been the most commonly used drug in the treatment of amebiasis. It is usually effective in relieving the distressing dysentery so frequently encoun-

tered in the disease. However, due to its harmful effects rarely can it be used in effective doses without danger to the patient. However, the drug is useful and should be used in all cases having dysentery and excreting motile forms of *Entameba histolytica*. The drug should be given intramuscularly in doses of one grain daily for eight days and a total dosage of ten grains should not be exceeded in a human adult. Emetine is particularly effective in the treatment of metastatic amebic infections such as abscess of the liver.

Carbarsone is the most effective of the organic arsenicals and has recently been accepted by the Council on Pharmacy and Chemistry of the American Medical Association<sup>3</sup>. Chemically, the drug is 4—carbamino—phenyl arsonic acid and contains 28.85 per cent of arsenic when anhydrous. Carbarsone is absorbed when given orally and is excreted in the urine. Reed et al<sup>4</sup> in reporting on its value as an amebicide state that "experimentally it is less toxic than acetarsone (stovarsol) but more amebicidal." "As with the arsenicals generally it is contraindicated in the presence of kidney or liver disease and should not be used in amebic hepatitis."

*The JOURNAL would like to record the scientific work of Georgia doctors. It earnestly requests, therefore, that each physician in the State who publishes a contribution in some other medical periodical submit an abstract of the article for these columns.*

Carbarsone is given twice daily for ten days in gelatin coated capsules containing 4 grains of the drug. After an interval of ten days the same treatment should be repeated if the cysts of *Entameba histolytica* are still present in the stool. While taking carbarsone patients should be seen regularly by the physician, as harmful effects such as exfoliative dermatitis and optic nerve injury have been reported following its use. In refractory cases of amebiasis carbarsone may be given in a retention enema.

The halogenated oxyquinoline compounds have been widely advertised and used in the therapy of amebiasis. Vioform<sup>5</sup> (iodochlorhydroxyquinoline) seems to effect the highest percentage of cures in this group of drugs.



Sometimes it aggravates the diarrhea in acute cases but this rarely persists for more than a few days. The drug is given in capsules containing 4 grains three times daily for ten days. After a rest period of one week the same treatment should be repeated. David<sup>5</sup> and his associates report a cure as determined by frequent stool examinations in thirty-eight out of forty-seven patients given vioform as outlined.

Bismuth subnitrate is the most valuable of the miscellaneous group of drugs. Its greatest use is probably as an adjunct in the treatment of amebiasis and it should be given following carbarsone or vioform in large doses for several weeks.

It must be remembered that certain cases of amebiasis are refractory to treatment. In such cases the drugs discussed should be alternated and retention enemas resorted to. Several stool examinations should be made after treatment has been completed in order to ascertain that the infection has been eradicated.

M. S. D.

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#### HAND INFECTIONS

Our medical society programs and medical journals are filled with case reports of unusual conditions, dissertations on the occasionally seen disease and discussions on problems of differential diagnosis where a standardization of nomenclature is a frequent result. Without detracting in the least from the interest and value of this medical knowledge, it must be admitted that the mortality and morbidity rate of a community remains unchanged after its dissemination. There is a definite tendency to over-emphasize the rarity in medicine at the expense of a better understanding of the common or frequently seen malady.

The management of hand infection has not received the attention it deserves. A useless hand particularly in an individual with dependents precipitates a grave economic problem. The medical attendant must realize the responsibility this places upon him. Dr. Allen B. Kanavel has presented to the profession a knowledge of this subject showing that with careful diagnosis, properly placed

incisions and efficient after treatment, we may expect a restoration to complete function in 95 per cent of the abscesses of the fascial spaces; while in tendon sheath infections the disability will be reduced by fully one half. A greater reduction is possible if the profession as a whole will learn to make an early diagnosis in this most lamentable complication. For twenty years now he has reported his studies and only recently the latest revised edition of his book was published.\*

The proper management of hand infections entails a prerequisite knowledge of the anatomy of the hand with special reference to the arrangement of the flexor tendon sheaths and their relationship to the major fascial spaces, particularly the middle palmar and thenar spaces. Excluding infections involving the distal phalanx (felon and nail infection) hand infections generally fall into three classes: namely, lymphangitis, suppurative tenosynovitis and fascial space abscesses. The latter is usually secondary or a sequella of the former. The differential diagnosis between lymphangitis and tenosynovitis is of extreme importance as the treatment to be instituted in the respective cases is exactly opposite; in lymphangitis the most conservative procedure of wet dressings without incisions while in tenosynovitis a radical course of early and adequate incisions. The appearance of fascial space abscesses should be constantly watched for following either as early surgical drainage of the involved fascial space is indicated.

In lymphangitis hasty incisions not infrequently lead to unnecessary loss of life; and if suppurative tenosynovitis is not recognized, the failure to institute early treatment leads to prolonged illness and permanent disability. Thus importance of careful study rather than a snap diagnosis can not be over-emphasized. The four cardinal signs and symptoms of tenosynovitis are exquisite tenderness over course of the sheath, limited to the sheath; flexion of the finger; exquisite pain on extending the finger; and symmetrical swelling of the entire finger. Lymphangitis is characterized by a generalized redness and swelling, usually a pitting edema on the dorsal surface, lymphadenitis, a systemic reaction and the absence of the above signs of tenosynovitis. The possibility of an abscess of one of the major spaces and the probable one to be involved must ever be borne in mind.

In our eagerness to discover and learn new facts, we too frequently fail to apply the knowledge that is available. Quoting Bern-

\*"Infections of the Hand"—by Dr. Allen B. Kanavel. Sixth Edition; Thoroughly Revised, Lea & Febiger, Philadelphia. Price \$6.00.

ard Ascher, "The most important factor in medicine is therapeutic success. It is of greater moment than all special investigations, be they ever so exact, and than ingenious theories."

EDGAR BOLING, M.D.

### FIFTH DISTRICT MEDICAL SOCIETY MEETING

ACADEMY OF MEDICINE, ATLANTA

October 18, 1934

#### PROGRAM

6:30 p.m.

A buffet supper will be served by members of the Fifth District Medical Society to visitors, members and their wives of the Fulton County Medical Society.

7:15 p.m.

#### I. Address of Welcome

Marion C. Pruitt, M.D., Atlanta, President of Fulton County Medical Society.

#### II. Response to Welcome: The Medical Association of Georgia and Its Component District Societies.

Clarence L. Ayers, M.D., Toccoa, President of Medical Association of Georgia.

#### III. *Surgical Complications of Pregnancy.*

William F. Shallenberger, M.D., Atlanta, Attending Obstetrician and Gynecologist to Piedmont Hospital.

Discussion: Olin S. Cofer, M.D., Atlanta, Attending Gynecologist to Georgia Baptist Hospital.

#### IV. *The Pathology of Rheumatoid and Hypertrophic Arthritis.*

James E. Paullin, M.D., Atlanta, President-Elect of Medical Association of Georgia, and Professor of Clinical Medicine, Emory University School of Medicine.

Discussion: Lawson Thornton, M.D., Atlanta, Attending Orthopedic Surgeon to Piedmont Hospital.

#### V. *The Pathogenesis of Congestive Heart Failure.*

Tinsley R. Harrison, M.D., Associate Professor of Medicine, Vanderbilt University School of Medicine, Nashville, Tenn.

Introduction: Hugh Wood, M.D., Atlanta.

Discussion: Carter Smith, M.D., Atlanta, Assistant in Medicine, Emory University School of Medicine.

#### VI. *Masses in the Groin.*

Isidore Cohn, M.D., Professor of Surgery, Tulane University School of Medicine, New Orleans, La.

Introduction: William Perrin Nicolson, M.D., Atlanta.

Discussion: Frank K. Boland, M.D., Atlanta, President of Southern Surgical Association and Professor of Clinical Surgery, Emory University School of Medicine.

#### VII. New Business.

#### VIII. Adjournment.

Note: A luncheon will be given by the Georgia members of the Southern Surgical Association in honor of Doctor Isidore Cohn. Place and time to be announced later.

#### Officers

Joseph Yampolsky, M.D., Atlanta, President.

George W. Fuller, M.D., Atlanta, Vice-President.

Hulett H. Askew, M.D., Atlanta, Secretary-Treasurer.

Edgar Boling, M.D., Atlanta, Ass't Secretary-Treasurer.

W. A. Selman, M.D., Atlanta, Councilor.

Marion C. Pruitt, M.D., Atlanta, Vice-Councilor.

### THE PHYSICIAN'S PART

Falling death rates during the depression are declared by high medical authority not a sufficient cause for optimism. Death rates are not a "sensitive index of ill-health and do not promptly measure decreased resistance to disease." We still have to face the full impact of depression on vitality. But one saving factor is to be reckoned on in bad times as well as in good—the service of the physician. This is too little appreciated. The London Times recently made a special plea for the payment of doctors' bills by those who have had the benefit of their attention. Even when the physician is not paid because of the poverty of his patients, his contribution to public health should at least have its due credit.

The doctor is in a peculiarly difficult position. The sick in their need cannot be expected not to call a doctor and the doctor cannot decline to respond unless he is paid in cash or has the assurance of prompt payment. He is not in the category of the merchant or the worker under salary or wage. He is under the compulsion of his skill—as well as of his own humane feeling—to answer every call. This is part of the definition of his occupation. It would bring his profession into odium as it would the individual if he were to refuse to go to the patient though there was no certainty of compensation. As a matter of fact, much of the average physician's skill is given with the certainty that there will be no payment except gratitude—and he cannot always be sure of that.

Many excuse their delay in paying the doctor, or their complete neglect of their obligation to him, by pleading their own limited means; but it is at best selfishness, or at worst something one hesitates to say, not to economize in spending for things not necessary in order to meet a doctor's bill. As it is, the physician sets an example of unselfish service to other professions and even to trade. Without his indispensable skill freely or generously given the depression would be far worse than it has been. That the death rate is not higher is in part due to that service seldom if ever paid in full. It is still much as it was in other times:

God and the Doctor we alike adore  
But only when in danger, not before.  
The danger o'er, both are alike requited—  
God is forgotten and the Doctor slighted.

The New York Times—Aug. 31, 1934.



## GEORGIA DEPARTMENT OF PUBLIC HEALTH

T. F. ABERCROMBIE, M.D., *Director*

### CONTROL OF TUBERCULOSIS IN GEORGIA

It seems strange, considering that the infectious nature of tuberculosis has been known over fifty years and suspected for centuries, that no very determined effort has been made to rid ourselves of this plague. Through improvement in living conditions, through education, the death rate has been reduced, but no serious attempt has been made to seek out the spreaders of tuberculosis (those that have it) and place and keep them under control until they are no longer a menace to others. It is not expected that any significant reduction in the death rate can occur until this fact is recognized and better isolation of open cases of tuberculosis is brought about, until earlier discovery of tuberculosis is made so that suitable treatment may prevent advanced tuberculosis and until by various means, especially surgical lung collapse measures, open cases may be closed.

Aware that a large percentage of the tuberculosis in the state could be found by the examination of a well selected comparatively small part of the population, the Georgia State Board of Health, with the State Tuberculosis Sanatorium (at that time a part of the State Board of Health) and the medical profession with assistance of the Georgia Tuberculosis Association, began in October 1930, a Tuberculosis Field Clinic Service. Its object was to locate cases of tuberculosis, contacts and suspects through an organization force aided by the local physicians, to examine them and, if found to have tuberculosis, arrange for their treatment by or through their physician.

It has been an inviolable rule for all workers in these clinics to furnish to patients information concerning clinic findings or directions for treatment only as directed by their family physicians.

At first, work could be done only in those counties which had full-time public health workers (County Health Commissioners or County Public Health Nurses), but in 1932, a tuberculosis follow-up nurse was employed and other counties were added until the clinic unit operated in fifty counties. The clinic organization work was done in nonhealth officer counties by a clinician employed by the State Board of Health and in the other counties by the county nurses. The clinic unit was composed of an x-ray technician, a clinic nurse and a tuberculosis clinician. This

clinician, formerly of the State Tuberculosis Sanatorium, has been taken over permanently by the State Board of Health.

The value of the assistance which has been afforded to the physicians of these counties by this diagnostic unit and to the patients themselves through the nursing service has been difficult to determine, but the popularity of the service to physicians and laity was evident from its beginning and it has continued to the present time. The unfortunate feature has been the lack of funds to carry the service to the entire state.

In 1926 there were 2,278 deaths from tuberculosis reported in Georgia, and in 1931, 2165, while in 1932, 1,933 deaths were reported and only 1,779 in 1933. Our tuberculosis control service was begun late in 1930 and the results could not be expected to show materially until 1932, and the figures enumerated are believed to be ascribable in large part to a combination of early discovery of more cases resulting in early treatment and by the more frequent use of lung collapse measures in many advanced cases. These procedures in properly selected cases not only save many lives but also serve as valuable preventive measures by rendering cases that were sources of infection to others non-communicable.

Anticipating a time when funds might become available for an expanded service a rather ambitious plan had been formulated. This called for ten tuberculosis follow-up nurses, a supervisor of nurses, and a clerk in addition to the x-ray unit personnel and the two clinicians already employed. The ten nurses, who were to be specially trained for tuberculosis clinic organization and follow-up work, were to be placed in as many districts, each having approximately a population of 175,000. They were not expected to operate in those counties having public health nurses, the latter to continue the tuberculosis service in their counties as they previously had been doing. It was the intention to operate, although on a much larger scale, as we have always done; that is, no change was to be made in its relation to the medical profession and reports of findings, x-ray interpretations, conclusions, etc., were to be made in every case to a physician of the patient's selection and this information as well as suggestions concerning treatment could be obtained by the patient *only through his physician*.

Since it has been determined by experienced clinicians that the x-ray is of the greatest importance in detecting early tuberculosis as well as in accurately judging its extent and nature, it was shown that by changing the method of clinic procedure 15,000 patients might be examined as against the 6,000 per year we were then examining. So, under this plan, it was proposed that patients be x-rayed at clinics previously arranged for and scheduled and that the films be sent to the central office to be developed. The chief clinician, then, was to interpret the films and correlate the findings with the information furnished by good histories, by tuberculin tests and laboratory findings. By such means a trained clinician finds it possible, usually, to arrive at correct conclusions. Those cases appearing to require further study may be examined physically at a later time at clinics arranged especially for this purpose. These special clinics would afford an opportunity to the local physicians to discuss their cases with the clinician and to hear talks on physical examination, x-ray technic and interpretation, methods and indications for tuberculin testing, and the significance of tuberculin actions, and on laboratory aids in differential diagnosis.

#### *Plan Now In Operation*

The Georgia State Board of Health takes pleasure in announcing that this plan is practically in full swing. FERA funds have provided since March, 1934, ten tuberculosis field nurses and two supervisors. These nurses are in the ten districts which had previously been mapped out. They have been very busy up to the present time organizing clinics and doing valuable follow-up work which means that they are securing not only medical care for the victims of tuberculosis, but are also obtaining in addition by various methods financial assistance for their families and are helping to rehabilitate them. Certainly there can be little value in discovering a case of tuberculosis unless a way is provided at the same time for adequate and proper treatment and for maintenance of the integrity of the family involved. These nurses are, through their family physicians, regularly scheduling for examination by our x-ray unit 300 patients per week which is the maximum capacity for it, for the clinician who interprets the films and for the office force which writes the reports and does the necessary record work. The field nurses are instructed—and the physicians are earnestly requested to help them in this—to try to have examined those who have had prolonged familial or household contact and those who have symptoms of tuberculosis. To screen out unnecessary examinations tuberculin tests

are made when possible since it is generally agreed that, with the exception perhaps of the very sick, persons showing no reaction to as much as 1.0 milligram of Old Tuberculin, or to the second dose of P.P.D. (Tuberculin Purified Protein Derivative, a standardized product the use of which should become general) cannot have active tuberculosis. It is estimated that there are at least 10,000 active cases of tuberculosis in Georgia. To discover them and place them under control requires the most careful screening of clinic material, and the utmost care should be exercised in this particular.

In a control service such as we are undertaking, equal consideration should be accorded the Negroes of the state. Tuberculosis in the colored race is a most serious problem.

Inasmuch as there has been no method devised or provided which can remove the necessity of treating tuberculosis at home, we are particularly stressing this feature. The beds available for the tuberculous of the state number less than seven hundred. If there are 10,000 patients or over in the state the inadequacy of a system of tuberculosis control which does not give the fullest consideration to home treatment is apparent. In this connection, it may be said that it is the policy of the State Board of Health to encourage in every possible way caring for these patients at home by their family physicians, to lend the greatest possible support to these physicians with its laboratory, with its diagnostic unit and with its physicians, trained particularly for this work, and to co-operate in the fullest sense of the word with all sanatoria and other agencies in the control of tuberculosis and in helping physicians to prepare themselves the better to diagnose and treat tuberculosis according to modern concept.

To sum up:

(a) The Georgia State Board of Health has in the field an x-ray unit which is having regularly scheduled for it patients at the rate of 15,000 per year.

(b) Every case is passed on by the Chief Clinician, who has had wide sanatorium and field clinic experience, and who spends about half of his time in the field.

(c) A splendid follow-up nursing program is being carried on under the direction of the State Director of Public Health by nurses furnished by the FERA.

(d) All cases are placed under the care of their family physicians who are afforded opportunity for instruction in modern methods of diagnosis and treatment of tuberculosis.

(e) Such a service, could it be maintained a comparatively few years, we are sure would finally make tuberculosis a rare disease.



## WOMAN'S AUXILIARY OFFICERS

President—Mrs. J. E. Penland, Waycross.

President-Elect—Mrs. E. R. Harris, Winder.

First Vice-President—Mrs. Ralph H. Chaney, Augusta.

Second Vice-President—Mrs. J. M. Barnett, Albany.

Third Vice-President—Mrs. G. Hugo Johnson, Savannah.

Recording Secretary—Mrs. Warren A. Coleman, Eastman.

Corresponding Secretary—Mrs. B. H. Minchew, Waycross.

Treasurer—Mrs. Chas. H. Richardson, Macon.

Parliamentarian—Mrs. Mather M. McCord, Rome.

Historian—Mrs. M. F. Haygood, Alto.

Chairman Public Relations—Mrs. Evert A. Bancker, Jr., Atlanta.

Chairman Press and Publicity—Mrs. J. Bonar White, Atlanta.

Chairman Legislation—Mrs. Dan Y. Sage, Atlanta.

### AUXILIARY MEMBER, DO YOU KNOW

1. Why there's a medical Auxiliary?
2. What the medical Auxiliary is accomplishing in health education?
3. What the program is for the coming year?

And, do you know

1. The set-up of the State Board of Health?
2. The purpose of the County Health Unit?
3. The laws concerning health and sanitation?

And, do you know

1. The main facts concerning immunization?
2. The main facts concerning malaria and its control?
3. The main facts concerning venereal diseases?

Are the lay groups in your community obtaining correct information on mother welfare, child welfare, cancer, tuberculosis, and are they acting upon it? Do you not see, Auxiliary Member, that it is you who must have knowledge and you who must pass it on to others. The women of Georgia, eager to protect the home, look to the doctor's wife to tell them what should be done, when to do it, and how to do it. We can not be disciples unless we first be students.

By all means, urge lay groups to hold health programs and see that your doctors are asked to give the technical information. Let us not be forward in offering health suggestions, but let us be ready. Get the study programs, make up study courses, ask Mrs. Ralph Chaney, 2571 Henry Street, Augusta, to send the Auxiliary educational material.

In addition to the pamphlets on Mother Welfare, which includes facts of prenatal, postnatal, and infant care, and cancer of the breast, uterus, and stomach, we have the following talks available:

How do you do?

Personal hygiene.

Sight conservation (2 papers).

Immunization (smallpox, typhoid, diphtheria, rabies).

Social hygiene.

List of books on social hygiene.

Dental defects and corrections.

Examination of servants.

Silent diseases.

Animals' contribution to the relief of suffering.

Cosmetic facts and fallacies.

Posture.

Mental hygiene.

Some facts on eugenic sterilization.

This year let us study and learn facts. It is comforting to be certain. A well-informed doctor's wife is unintentionally an "expert contact-man."

KNOW? YES!

MRS. E. A. BANCKER, JR.

*Chm. Public Relations. Com.*

### DISTRICT MEETINGS

The First, Sixth and Tenth District Medical Auxiliaries have had their summer meetings. The Sixth District Auxiliary met June 27th in Louisville with the Jefferson County Auxiliary as hostess. Mrs. Wm. M. Cason of Sandersville, Washington County, the District Manager, presided; Mrs. Bryson welcomed the Auxiliary and Mrs. C. C. Hinton of Bibb County, a past President of the State Auxiliary, responded.

Interesting reports were given by Mrs. Clay of Bibb County, Mrs. E. W. Allen of Baldwin County, Mrs. S. T. R. Revell of Jefferson County, Mrs. Wm. Cason of Washington County. Laurens County did not report.

Visitors included Mrs. J. E. Penland, State President; Mrs. C. L. Ayers of Stephens County, wife of the President of the Medical Association of Georgia; Mrs. C. H. Richardson of Bibb County, State Treasurer; Mrs. C. M. Stephens of Ware County, Eighth District Health Chairman; Mrs. K. McCullough, Secretary and Treasurer of Ware County; Mrs. Russell of Alabama.

Mrs. Penland discussed "Our Objectives" for the year and briefly traced the develop-

ment of the various state standing committees and reported the meeting called by Dr. Minchew and Dr. Ayers in Atlanta, June 14th to outline the Auxiliary program for the year. She also explained Georgia's reasons for having a Doctor's Day and for selecting March 30th as the day of observance.

Dr. Revell, President of the Sixth District Medical Society, brought the Auxiliary a cordial greeting, before the Auxiliary joined the Society for lunch. During the afternoon session, Dr. Ayers, State President, addressed the Auxiliary, emphasizing the importance of the physical examination and correction of defects of the preschool child.

The social hour after a meeting is always important as it gives opportunity for local questions to be discussed with the State President and District Manager, for material to be distributed and ordered and for friendships to develop. Therefore, the tea at Mrs. Revell's, given by the local Auxiliary, was delightfully welcome and appreciated.

#### *The First District Meeting*

The First District Auxiliary met July 25th in the DeSoto Hotel Savannah. Mrs. Lee Howard of the Georgia Medical Auxiliary, and First District Manager, presided. Mrs. R. Lester Neville of Savannah welcomed the Auxiliary and Mrs. J. N. Daniel, Claxton replied.

After business this excellent program was presented. An address, "Mother Welfare" by Dr. E. C. Demmond. Introduction of state officers and chairman, including Mrs. J. E. Penland, State President, and Mrs. Hugo Johnson, State Third Vice-President, who presented the District with a new gavel, and Mrs. Wm. Myers and Mrs. R. Lattimore, past State Presidents. Address, "The Part of the Medical Auxiliary in a Community Public Health Program" by Miss Helen Bond, R.N., of the Savannah Health Center. Plans of Committee Chairman: Public Relations, Mrs. R. E. Graham, Savannah; Health Education, Mrs. J. C. Metts, Savannah; Legislation, Mrs. J. W. Daniel, Claxton; Publicity, Mrs. E. N. Gleaton, Savannah. Report of Manager, including plans for organization, and Student Loan Fund, Mrs. Lee Howard. Address, "Our Objectives," by Mrs. J. E. Penland, State President.

Report of local Auxiliaries by their presidents: Chatham (Ga. Med.), Mrs. G. Hugo Johnson, Savannah; Screven, Mrs. L. Fielding Lanier, Sylvania; Bulloch-Candler-Evans, Mrs. J. W. Daniel, Claxton.

Address, "The Physician's Wife," by Dr. C. L. Ayers, President Medical Association of Georgia.

Luncheon at the DeSoto was followed by a ride to Tybee. Returning, a visit was made at the home of Dr. and Mrs. G. Herman Lang, on Wilmington Island, where a buffet supper was enjoyed by the Auxiliary and Society, the local Auxiliary being hostess.

Officers of the First District are: Mrs. Lee Howard, Manager, Savannah; Mrs. J. W. Daniel, Claxton, Vice-President; Mrs. E. N. Gleaton, Savannah, Secretary-Treasurer; Mrs. J. S. Howkins, Savannah, Parliamentarian.

#### *Attention, Auxiliary Members*

Please give to your local Presidents, any news about your Auxiliary work that includes your public relations work, health education, chairmanships, distribution of material in other organizations, talks you make, assistance in health projects, in adding to Auxiliary membership, and cooperation with any Auxiliary objective. Presidents, please send news items of your members and Auxiliary to Mrs. White, by the 16th of each month. Send all clippings to your District Scrap-Book Chairman and to your State Scrap-Book Chairman, Mrs. Johnson.

#### *Tenth District Meeting*

The Tenth District Auxiliary met in the charming historic Woman's Club of Washington, August 8th. The Manager, Mrs. D. M. Carter presided and after the welcome by Mrs. C. E. Wills of Washington and the response by Mrs. R. H. Chaney of Richmond County this program was presented:

Address, "The New Deal as it Relates to Medicine" by Dr. C. L. Ayers, President, Medical Association of Georgia; paper, "Characteristics of a Good Doctor's Wife," Mrs. D. M. Carter; "History of the American Medical Association Auxiliary" read by the Secretary; "Doctor's Day and Student Loan Fund," Mrs. R. H. Chaney; report of Local Auxiliaries. Nine counties were represented, although all were not organized. This was encouraging.

Dr. Ayers in his address, made the statement that the greatest progress made in the past years was that of having a Medical Auxiliary. This was also made by Dr. Lattimore in his Georgia Centennial Paper, last year.

Georgia had purchased a number of copies of the history of the A.M.A. Auxiliary and the part Georgia has contributed has made it proud. Mrs. A. H. Bunce has been National President, Mrs. M. T. Edgerton, National Secretary, Mrs. J. M. Brawner a Director and Mrs. Bonar White is now Third Vice-President.

A novel feature was "What characteristics



are necessary to make a Good-Doctor-Husband?" This was a source of fun as by-gone experiences came from timid lips and it was evident that many wives had practiced for their families!

The members of the Auxiliary joined the members of the Association for a barbecue lunch and later cemented friendships over the bridge tables.

#### NEWS ITEMS

The Randolph County Medical Society met at the Patterson Hospital, Cuthbert, September 6th. Dr. Guy J. Dillard, Columbus, read a paper entitled, *Present-Day Conception of Pulmonary Tuberculosis*.

The Cherokee County Board of Health in cooperation with the Cherokee County Medical Society and the assistance of four nurses will examine the people on the rolls of the Federal Emergency Relief Administration in Cherokee County for various diseases. Dr. Grady N. Coker, Canton, has been appointed physician for the Board. No treatment is contemplated in connection with the work.

The Association of Military Surgeons of the United States will hold its Forty-Second Annual Convention at Field Medical Service School, United States Army, Carlisle, Pa., October 8, 9, 10. The meetings will be of a practical nature demonstrating the latest field medical equipment for the treatment of the sick and wounded and their evacuation from the field of battle, also field sanitary appliances.

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, September 6th. Dr. R. Hugh Wood gave a case report, *Diabetic Lipemia with Lipemia Retinitis*; Dr. Edgar H. Greene made a clinical talk on, *Dysmenorrhea*; Dr. J. Gaston Gay read a paper entitled, *Problem of Adenoma of the Thyroid*. The discussions were led by Dr. Kenneth Bell, Dr. Ben H. Clifton and Dr. J. K. Fancher.

For information in reference to a location for a physician in a country town, write the Secretary-Treasurer of the Association.

The International Assembly of the Inter-State Post-Graduate Medical Association of North America will be held in the Public Auditorium, Philadelphia, Penn., November 5-9, 1934. Many distinguished teachers and clinicians will appear on the program. A major list of the names of the contributors to the program, with other information appears in this Journal. All members of the Medical Association of Georgia are cordially invited to attend. Registration fee of \$5.00 admits all members of the profession in good standing.

Dr. Wayne S. Aiken announces the removal of his office to 602 First National Bank Building, Atlanta.

Dr. Chas. H. Mitchell announces the opening of his office at 35 Fourth Street, N.E., Atlanta.

The Burke-Jenkins-Screven Counties Medical So-

ciety met at Millen on September 6th. Dr. R. L. Miller, Waynesboro, read a paper on *Coronary Thrombosis*; Dr. J. M. Byne, Jr., Waynesboro, *Angina Pectoris*. Case reports by Dr. H. W. Doster, Rocky Ford; Dr. G. G. Lunsford, Millen; Dr. J. M. Byne, Jr., Waynesboro; Dr. R. L. Miller, Waynesboro; and Dr. Cleveland Thompson, Millen.

The Ware County Medical Society met at Waycross on September 5th. Dr. J. E. Penland, Waycross, read a paper entitled *Acute Poliomyelitis*. The members were entertained at dinner by Dr. W. C. Hafford and Dr. B. R. Bussell, both of Waycross.

The Lowndes County Medical Society met at the Daniel Ashley Hotel, Valdosta, on August 14th. Dr. Jas. E. Paullin, Atlanta, President-Elect of the Association, gave an illustrated lecture on *Arthritis*. The members and visitors were entertained at dinner by Dr. Frank Bird and Dr. J. M. Smith, both of Valdosta.

The Grady Hospital Staff meeting was held on September 11th. The program consisted of Morbidity and Mortality Reports, Reports of Committees; *Case Presentation—Acute Abdomen* by Drs. Davison and Mitchell; *Case Presentation*, Drs. Eberhart and Lewis.

The Ninth District Medical Society met at Gainesville on September 19th. The scientific program consisted of the following titles of papers: *Cancer Symposium*, conducted by Dr. J. L. Campbell, Atlanta, Chairman of the Cancer Commission of the Association. *Rheumatoid Arthritis*, Dr. Jas. E. Paullin, Atlanta, President-Elect of the Association; discussion led by Dr. H. K. Phillips, Cleveland. Address by Dr. Clarence L. Ayers, Toccoa, President of the Association. Luncheon was served at the Wheeler Hotel.

#### OBITUARY

Dr. Julius B. H. Day, Social Circle; member; University of Louisville School of Medicine, Louisville, Ky., 1891; aged 66; died at his home after an illness of several months duration on September 7, 1934. He was a member of one of the prominent pioneer families of Walton county. Dr. Day and his people during their lives were identified with the civic and religious affairs of the community. He was born and reared in Walton county and practiced medicine there for more than forty years. A large circle of friends and acquaintances held him in high esteem. No physician could have been more engrossed in his professional work and the welfare of his patients. The rich and poor could always rely on Dr. Day to spare no effort to relieve their suffering and to restore their health when humanly possible. It was a pleasure to every one to notice the courteous, refined and scholarly manner in which he greeted people he contacted or who contacted him. If any one for his affable, gracious disposition should be likened unto the Earl of Chesterfield, it should be Dr. Day. He was a member of the Walton County Medical Society, the American Medical Association and the First Baptist church. Surviving

him are his widow, two brothers, J. M. Day, Monroe; John Day, Milledgeville, and a number of nephews and nieces. Funeral services were conducted from the First Baptist church by Rev. Walker Combs and the pastor, Rev. Smith. Burial was in the city cemetery. Members of the Walton County Medical Society formed an honorary escort.

*Dr. Gordon Flewellen Chambers*, Columbus; Atlanta College of Physicians and Surgeons, Atlanta, 1900; aged 59; died at his home on August 2, 1934. He was a prominent physician and former exalted ruler of the Columbus Lodge of Elks and one-time secretary-treasurer. Dr. Chambers had many friends. Surviving him are his widow, one son, Gordon F. Chambers, Jr. Funeral services were conducted by Dr. F. S. Porter, pastor of the First Baptist church, from the Striffler Funeral Home. Burial was in the city cemetery.

*Dr. Fletcher T. Mixon*, East Point; University of Georgia Medical Department, Augusta, 1881; aged 79; died at the home of his daughter, 111 North Church Street, on August 8, 1934. Before he retired from practice, he was a prominent physician and had many friends. At the time of his death he was a steward and trustee of the East Point Methodist church. Surviving him are one son, Thomas N. Mixon; three daughters, Mrs. T. B. Harper, Mrs. Noble Weathers and Miss Mildred Mixon, all of East Point. Funeral services were conducted by Rev. J. T. Robins from the East Point Methodist church. Interment was in Palmetta cemetery.

*Dr. Charles F. Bush*, Colquitt; Lincoln Memorial University Medical Department, Knoxville, Tenn., 1909; died at the home of his parents on August 14, 1934. He had been in ill health for about ten years. Dr. Bush practiced medicine in Miller county for a few years and on account of his health entered the turpentine and lumber business. Finally he was forced to retire from all business activities. He was a member of the Baptist church. Surviving him are his parents; two sisters, Mrs. J. T. Jones and Mrs. Earl May, both of Colquitt; five brothers, J. W., Albany; Lester, Palatka; C. B., R. W. and Blackshear Bush, all of Colquitt. Rev. Lee Knowles conducted the funeral services from the home of his parents. Burial was in the city cemetery.

*Dr. Edward Houston Hice*, Rock Springs; member; Chattanooga Medical College, Chattanooga, Tenn., 1894; aged 66; died in a private hospital at Chattanooga, on August 31, 1934. He had practiced medicine in Walker county for forty years. Dr. Hice had many warm personal friends and was a successful practitioner. Surviving him are his widow, three daughters, Mrs. Edgar Conger and Miss Virginia, both of Rock Springs; Mrs. W. R. Bagwell, Chattanooga. Funeral services were conducted by Rev. J. W. Coffman and Rev. T. J. Smith from Rock Springs Methodist church. Burial was in the village cemetery.

## BOOK REVIEWS

*Modern Clinical Syphilology: By John H. Stokes*, M.D., Duhring Professor of Dermatology and Syphilology, University of Pennsylvania; Member, Commission on Syphilis and Cognate Diseases, League of Nations Health Organization. Second Edition, Revised and Entirely Reset. 1400 pages with 973 illustrations and Text Figures. \$12.00 net. Philadelphia and London: W. B. Saunders Company, 1934.

While animal experimentation has yielded invaluable knowledge that could be gained in no other way, in the ultimate analysis the case report remains the corner store of modern medicine. And cases studied by the thousand provide a firm foundation for clinical medicine. What appeals to the reviewer particularly about this volume is that the author has his feet firmly on the ground: he presents his material to appeal above all to the clinician, and he presents it with delightful informality.

While Dr. Stokes disclaims that he has written an encyclopedia, preferring to call the work a monograph or a textbook, to most of us it will seem that he has brought together all of the present clinical knowledge of syphilis. It is extraordinary how much syphilology has been advanced in the past six years, especially in the neurologic, cardiovascular, visceral and prenatal fields. Perhaps too one may remark the crystallization of ideas on the subject of treatment of the early case.

It was the Harvard Law School (or at least they generally get the credit for it) that introduced the "Case System" in teaching the law. Of course long before, Osler in this country had taken students to the bedside to illustrate principles in medicine with the live patient. More recently the "dry clinic" has become popular. Dr. Stokes has developed this scheme magnificently, and one cannot read over one of the framed case reports with its snappy discussion without remembering the point involved. Usually his interest will be stimulated to read more of the text, which will amply repay him both in instruction and entertainment.

The work is one of which American medicine should be proud. L.M.B.

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*Mental Hygiene In The Community*, by Clara Bassett. Pp. 394. Price \$3.50. New York and London: The Macmillan Company, 1934.

Miss Bassett is well fitted by both training and experience to deal with any subject pertaining to human relations. In this book she has dealt with these relations in a most effective and instructive manner. Everyone dealing with groups of individuals, adult and children, or with the public in general, would profit by a reading of this book.

The book takes up the various classes of individuals dealing with the public and discusses the types of relationship involved. Doctors, lawyers, ministers, school teachers, social workers, etc., are discussed separately. The whole approach is psychiatric. In taking up these professions, she first speaks of the role which each



should fulfill in public relations. She next shows how far short each one falls in carrying out the role. Then she goes into the need for broadening the curricula of professional courses so that they will include some consideration of the social sciences.

It is interesting to note that the two professions, Law and Medicine, which deal most intimately with the public, give the minimum of instruction on human relations. The legal schools have no courses in these subjects; medical schools very little.

This book is especially challenging to the medical profession. Doctors do not take the interest in public welfare that their training and ideals would seem to indicate. For this reason every doctor will find inspiration and help to larger service within the pages of "Mental Hygiene in the Community."

W. WALTER YOUNG, M.D.

#### BOOKS RECEIVED

*The Dangerous Age In Men—A Treatise on the Prostate Gland* by Chester Hilton Stone, M.D. Topics covered are: When is a man old?, the male organs of generation, prostatitis and allied conditions, enlarged prostate, the prostate and infection, sexual life and prostate, seminal vesiculitis, prevention of prostatism, speaking of operations, prostatism without the prostate, diet and sleep, psychic and physical harmony, a word to the wives. Contains 105 pages. Publishers: The Macmillan Company, 60 Fifth Avenue, New York City. Price \$1.75.

*Clinical Aspects of the Electrocardiogram—Including Cardiac Arrhythmias* by Harold E. B. Pardee, M.D., Assistant Professor of Clinical Medicine, Cornell University Medical College; Associate Attending Physician, New York Hospital; Consulting Cardiologist, Lying-In Hospital and Woman's Hospital, New York City. The Third Revised Edition, contains 295 pages and 74 illustrations. Publisher: Paul B. Hoeber, Inc., 76 Fifth Avenue, New York City.

*Practical Talks on Heart Disease* by George L. Carlisle, M.D., Associate Professor of Clinical Medicine of Baylor University, Dallas, Texas. Contains 153 pages. Publisher: Charles C. Thomas, Springfield, Ill. Price \$2.00.

#### A PLAN TO EVALUATE INDEPENDENTLY SEROLOGIC PROCEDURE FOR THE DIAGNOSIS OF SYPHILIS IN THE UNITED STATES

Since the serologic conferences at Copenhagen and Montevideo, there has been an increased interest in the relative value of serologic tests for the diagnosis of syphilis. At these conferences the test of only one serologist of the United States was presented for consideration. There are a number of excellent serologists in this country, many of whom have described original modifications of the complement-fixation and precipitation tests for syphilis. It is felt that the tests of these workers merit consideration.

The United States Public Health Service is co-

operating with the American Society of Clinical Pathologists in the drafting of a plan to evaluate independently serologic procedure for the diagnosis of syphilis in this country. Briefly, the plan contemplates the collection of specimens of blood from at least 1,000 individuals and the distribution of comparable specimens to the laboratories of serologists who have described an original modification of a complement-fixation or precipitation test for the diagnosis of syphilis. The donors of the specimens will be carefully selected so as to measure both the specificity and sensitivity of the serologic procedure. The sending of specimens to workers at considerable distance from the point of collection will be expedited by the use of the most modern transportation facilities, while the delivery of specimens to nearby serologists will be delayed so as to make the delivery time approximate that for those workers at the more remote points.

A committee of five members consisting of two specialists in the field of clinical syphilology, two members of the American Society of Clinical Pathologists, and one officer of the United States Public Health Service will organize the plan of study and, after all laboratory reports have been submitted by participating serologists, will interpret the results on the basis of clinical findings. The collection of the specimens will begin about December 1, 1934, and a number of serologists will be invited to take part in the evaluation scheme.

It is possible that the name of some serologist who has described an original modification of a test for syphilis may have been inadvertently omitted. Any serologist desiring to participate will be extended an invitation upon presentation of suitable proof as to the originality of his modification of a serologic test. A brief description of the plan will also be sent to those workers who may be interested.

Correspondence should be addressed to the Surgeon General, United States Public Health Service, Washington, D. C.

#### ANTIRACHITIC VITAMIN D IN MILK

The incorporation of the antirachitic vitamin D in milk is logical, according to the paper outlined in Abstract No. 2038, because milk is the universal food of infants, and from 50 to 60 per cent of all infants show clinical evidence of rickets during the winter months. Vitamin D milks are stated to be more effective for this purpose than are other antirachitics, as shown by extensive clinical tests.

Calcium retention was the same in infants on irradiated evaporated milk, on evaporated milk fortified with a concentrate of vitamin D, and on cod liver oil, as shown by the preliminary report mentioned in Abstract No. 2039.

Vitamin D in the diets of children reduces the incidence of dental caries, according to the study reviewed in Abstract No. 2040.

The superiority of cod liver oil over viosterol alone as an antirachitic is indicated in the review of 948

clinical cases reported in Abstract No. 2041, and also in the laboratory investigations set forth in Abstract No. 2042. In the latter it is stated that cholesterol rather than ergosterol is the real provitamin D, which explains the unique value of irradiated milk, since milk contains cholesterol.

Evaporated and fresh milk formulas gave identical results in a feeding experiment with 60 babies, but the evaporated formulas were more easily digested. This clinical study is reviewed in Abstract No. 2043.

Powdered Whole Milk (Klim) is advocated as particularly useful in the dietary treatment of rheumatic children, in the article which is the basis of Abstract No. 2044. A prophesy that the milk supplies of the future will be in dried or powdered form is offered in the editorial mentioned in Abstract No. 2045.

2038. *Clinical Experience with Vitamin D Milks*. J. M. Lewis. N. Y. State Jour. Med. 45:685, Aug. 1, 1934.

Investigations of the incidence of rickets show that from 50 to 60 per cent of infants in New York City display evidence of clinical rickets in the winter, and that in 10 per cent of the white and 20 per cent of the colored babies, rickets is severe. Since milk is the universal food for infants, it is logical to enrich it in vitamin D, thus providing automatic protection against this widespread disease.

When vitamin D milk is employed, a smaller number of units is required than in the case of other antirachitics. Irradiated milk is protective when 42 rat units of vitamin D are fed daily, whereas 600 units are needed when viosterol is used, and cod liver oil must furnish 160 units. Vitamin D milk from cows fed on irradiated yeast is effective in the control of rickets when 24 ounces containing 160 rat units per liter are given daily. These results have been shown by clinical tests on 202 infants, carried out by the author and the late Dr. A. F. Hess.

Milk containing 80 units of crystalline vitamin D, isolated from ergosterol, has also displayed marked antirachitic properties, but poorer results were achieved when this crystalline vitamin D was dissolved in oil, a fact proving again that milk is the ideal medium for vitamin D.

*The Borden Digest*—Vol. 5, No. 5, Sept. 1, 1934.

## Portable Electrocardiograph

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Pre-Assembly clinics, November 3rd; post-assembly clinics, November 10th. Philadelphia Hospitals

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Robert G. Torrey, Philadelphia, Pa.  
Waltman Walters, Rochester, Minn.  
Allen O. Whipple, New York, N. Y.  
Hugh H. Young, Baltimore, Md.

### FOREIGN ACCEPTANCES TO DATE

Dr. Roberto Alessandri, Prof. of Clinical Surgery, Medical Dept. Royal University of Rome, Rome, Italy.

Dr. A. Mario Dogliotti, Prof. of Clinical Pathology, Royal University of Turin, Turin, Italy.

Sir Harold Gillies, London, England.

Dr. Hans Guggisberg, Prof. of Gynecology, University of Berne, Berne, Switzerland.

Dr. Paul Strassmann, Prof. of Obstetrics and Gynecology, University of Berlin, Berlin, Germany.

### TENTATIVE:

Mr. A. Lawrence Abel, F.R.C.S., Surgeon Cancer Hospital, London, Eng.

Prof. Mario Donati, Head of Dept. of Surgery, University of Milan, Milan, Italy.

Dr. Ferdinand Sauerbruch, Prof. and Head of the Dept. of Surgery, University of Berlin, Berlin, Germany.

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## THE PRESENT STATUS OF GASTRIC SURGERY\*

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I keenly appreciate the honor of being asked to present this year's surgical address before the Medical Association of Georgia, and have chosen for my subject a brief resume of surgical lesions of the stomach and duodenum. Although I wish to confine my remarks principally to a discussion of the recent advances in the surgical treatment of these lesions, before doing so I should like to use as a foundation for that part of the discussion a brief review of the accepted principles of gastric and duodenal surgery and their relation to various pathologic lesions of these structures.

### *Carcinoma of the Stomach*

The most common tumor of the stomach is carcinoma. A larger proportion of carcinomas occur there than in any other organ of the body, and gastric carcinoma affects three times as many men as women. Carcinoma of the stomach, as is true of carcinoma in most other regions, is curable in its early stages but hopeless when it has progressed to the extent that the neoplasm cannot be removed; control of the disease rests primarily on its early recognition so that surgical removal can be accomplished. The disease appears among persons between the ages of forty and sixty-nine years in 85 per cent of cases. The symptoms, signs and course of the disease are dependent, in large measure, on the situation, extent, and rigidity of the growth. In certain situations in the stomach,

namely, in the upper and middle portions, carcinoma may develop and produce but few symptoms, whereas growths that interfere with emptying of the stomach give rise to marked disturbance even in their early stages.

In general, the most important and most frequently occurring symptom is persistent, dyspeptic discomfort. In some cases symptoms suggestive of an ulcer may have been present for a period of years, only later to assume malignant characteristics, such as failure of the patient to obtain relief from pain by methods which previously had been effectual. Then there is a relatively small group of patients who have had indigestion of an irregular nature, sometimes the result of a diseased appendix or gallbladder, with mild symptoms, and the change to symptoms characteristic of carcinoma is so insidious that the patient is without knowledge of such change.

Carcinoma of the stomach can be detected by a competent roentgenologist in 95 per cent of cases. It should be emphasized that roentgenologic examination of the stomachs of patients forty years of age or more who have indeterminate dyspepsia is the most important procedure in examination, and it should never be omitted in any suspicious case.

The difficulty and importance of diagnosis of a malignant lesion of the stomach has been well stated by Balfour: "There is no characteristic syndrome of carcinoma of the stomach. Although there is a more or less constant syndrome in the average case, there are so many exceptions to the rule that the astute clinician will, by keen recognition of this fact, establish a diagnosis of the disease at a time when the symptoms are bizarre and when surgery can offer some prospect of cure."

\*Read before the Medical Association of Georgia, Augusta, May, 9, 1934.

*Types of Malignant Gastric Lesions.*—Ulcerating adenocarcinoma of the stomach is of most common occurrence. The lesion tends to be more painful than other types, and blood oozes from it more freely. Large tumors of the stomach usually are of the colloid type; the lesions are sharply demarcated and thus readily lend themselves to removal by extensive resection of the stomach. This should emphasize the point that it is not the size of the lesion but its mobility and extent which determines whether it can be removed. The scirrhus type of lesion is frequently localized at the antrum of the stomach and produces symptoms by obstruction, whereas the linitis plastica type, with involvement of the entire stomach, may exist with but few symptoms until late in its progress. Sarcoma of the stomach occurred in the proportion of one sarcoma to 159 carcinomas in the years 1908 to 1920 at The Mayo Clinic, as reported by Masson. It might be said in general that sarcoma of the stomach occurs earlier in life than carcinoma. In a study of fifty-four cases of sarcoma of the stomach seen at the clinic from 1908 to 1929, Balfour and McCann found that in all but one case the patient had come to operation. The majority of the lesions were diagnosed as carcinomas of the stomach before operation, and the lesions were removed surgically in thirty-six of the cases.

*Progress in Treatment.*—During the past year the progress that has been made in the treatment of carcinoma of the stomach can be attributed to (1) increasing efficiency with which the competent roentgenologist can identify even the smallest gastric lesion, and (2) extension of the field of operability to include extensive carcinomas of the stomach which heretofore might have been regarded as being on the borderline of operability, or even roentgenographically considered to be inoperable or unremovable.

The value of roentgenographic examination in cases of early carcinoma of the stomach is strikingly illustrated in the following three cases: In the first case, the presence of a small, carcinomatous, ulcerating lesion, measuring 1.9 by 1.7 cm., was detected by the roentgenologist; the lesion was successfully removed by gastric resection. The

pathologist confirmed the diagnosis of malignancy. In the second case, that of a man aged thirty-two years, the roentgenologist had made a preoperative diagnosis of a small, ulcerating, malignant lesion of the lesser curvature of the stomach. At operation, with the lesion between my exploring fingers, I felt that it was the result of an inflammatory reaction. The distal half of the stomach and the duodenum were removed because of uncertainty concerning the nature of the lesion, and the pathologist reported it to be an adenocarcinoma, graded 2. Some time ago I operated on a patient who had a small, recurring ulcer of the lesser curvature of the stomach two years after reported local excision of a gastric ulcer. Recurrence of the symptoms associated with pylorospasm had occurred. The roentgenologist reported a gastric ulcer with a small crater. At operation, the lesion appeared grossly to be a benign gastric ulcer, with a round, smooth crater approximately 1 cm. in diameter. Because of the history of recurring ulcer and the associated pylorospasm, gastric resection was performed, cutting well beyond the lesion, using the Billroth I-Haberer anastomosis between the stomach and the second portion of the duodenum to restore continuity. Although on gross examination the lesion appeared to be benign, a few minutes later a report following microscopic examination was that the lesion was a carcinoma.

In the first two of these cases the roentgenologist was correct in his declaration that the lesions were malignant, whereas in the third case the possibility of the lesion being malignant was not suspected until microscopic examination had revealed its presence. I believe the statement is justified that the report of a malignant lesion of the stomach made by a competent roentgenologist is almost certain to be accurate, but the report of a gastric ulcer made by a roentgenologist or even by a surgeon who actually sees the tissue at the time of operation does not exclude the possibility that the lesion may be carcinomatous.

I should like to emphasize the point that small, ulcerating lesions of the stomach may be carcinomas. Several years ago, McVicar called attention to the fact that an ulcerating



lesion of the stomach which disappears following a course of medical treatment cannot always be assumed to be benign, for he found that many patients with ulcerating lesions of the stomach may respond temporarily to medical treatment even when the process is malignant. To consider such disappearance of a lesion as a criterion that it is benign may cause delay in attacking the lesions surgically, and it may allow an operable lesion to proceed to inoperability. There is no doubt that medical treatment of many benign gastric ulcers by internists skilled in treatment of gastro-intestinal disease is worthy of trial for certain types of gastric ulcer, particularly when the condition is acute and the patient young. This treatment should be attempted only when the patient can be kept under observation for several months. It should be emphasized that the decision to treat such a person by medical measures carries great responsibility, for if the lesion is malignant by the time it is found to respond unsatisfactorily to medical treatment, sufficient time may have elapsed for it to have become unremovable. I vividly recall one patient with a gastric ulcer who was being treated medically. Pain was relieved, blood disappeared from the stools, and the niche disappeared on roentgenologic examination. Ten months later, however, symptoms reappeared. The roentgenogram revealed the lesion, exploration was made, and an extensive, inoperable, malignant lesion was found from which the patient died a few months later.

#### *The Curability of Carcinoma of the Stomach*

If further progress is to be made, therefore, in securing a larger proportion of three-year and five-year cures in cases of carcinoma of the stomach, every effort must be made to recognize the presence of gastric lesions in their earliest stages. As has been pointed out, the symptoms, signs, and course of the disease are dependent in large measure on the situation, extent, and size of the growth, and in general that the most important and most frequently occurring symptom is persistent dyspeptic discomfort.

Reference has also been made to the difficulty of determining the exact nature, before microscopic examination, of an ulcerat-

ing lesion of the stomach. In addition to carcinoma and ulcer of the stomach, relatively few other gastric lesions occur with any degree of frequency; these are gastric polyps, lymphosarcomas, and syphilitic lesions of the stomach. All of these lesions occur in the proportion of less than 1:100 in comparison with carcinomas. The malignant potentialities of all polyps of the stomach parallel those of polyps of the colon. Therefore, the periphery of a polyp, as well as its pedicle, should be carefully examined at the time of its removal to ascertain the presence or absence of malignant cells. In a pathologic study of five recent cases in which gastric polyps had been removed, McRoberts found that in four of the polyps there was secondary cytoplasmia at the periphery. With larger gastric polyps, the probability of malignant degeneration makes partial gastrectomy advisable.

When considering gastric polyps, attention should be directed to the fact that a large polypoid tumor of the stomach may be attached by a narrow pedicle, and yet, on roentgenologic examination, may so displace the barium as to lead to the impression that an extensive, malignant lesion is present. If the pedicle is short and the polyp lies in the upper part of the stomach, the erroneous conclusion is reached that an inoperable lesion is present, whereas easy access to the tumor can be gained by the transgastric approach. Further tending to obscure the diagnosis is the fact that in almost all cases of gastric polyp, when complicated by other gastric lesions, free hydrochloric acid is not found in the gastric content.

#### *Surgical Treatment*

It has been the custom at the clinic to advise exploration in cases of carcinoma of the stomach, unless unremovable, metastatic growths have been proved to exist. The rationale of such a decision rests on the basis that roentgenograms occasionally will give evidence that a lesion is of greater extent than it really is, and frequently the stomach is found to be unusually movable, a circumstance which makes any localized gastric carcinoma suitable for removal. Occasionally a diseased and distended gallbladder, or distention of the splenic flexure of the colon from gas, or the presence of other lesions in

adjacent viscera, such as pancreatic cysts, may so interfere with the neuromuscular activity of the stomach that apparent defects in outline, suggestive of carcinoma, manifest themselves. When such disturbances involve the upper portion of the stomach, they may lead to the erroneous interpretation that the lesion is inoperable.

In the last few years at the clinic, we have been able to remove an increased number of extensive malignant lesions of the stomach. This has been particularly due to the fact that a patient is always given the benefit of exploration and removal of the malignant gastric lesion if it is feasible to do so. In the last four years, total gastrectomy has been performed at the clinic in nine cases. In November, 1932, two of these nine patients were living and well more than two years after operation, and one more than one year after operation. That such an operative procedure could be carried out in suitable cases with great benefit to the patient has led to the impression that gastric lesions should be considered removable unless they have invaded adjacent structures and thus cannot be removed in their entirety. In many cases in which the lesion at first appears to be incapable of removal because of the extent of the growth, or because of its attachment to the mesocolon or to the capsule of the pancreas or liver, it is found that, after freeing of adhesions and separation of the lesion from the structures, the growth can be removed. In other cases, particularly if the tumor is large, the uninvolved portion of the stomach may be thickened and give the appearance of involvement, although thickening may only be the result of gastritis adjacent to the lesion. Balfour has called attention to the fact that a gastric lesion examined while the patient is straining under light anesthesia may appear unremovable, but that under deep anesthesia the lesion may be readily accessible.

*The Influence of Age on Operability.*—On previous occasions I have emphasized the fact that, in the consideration of operability of any lesion, advanced age of a patient is no detriment to successful completion of an operative procedure, regardless of its magnitude. In other words, everything else being equal,

it is not the patient's age but the patient's general condition which determines the operative risk of a given surgical procedure. The ability of elderly patients to withstand such procedures as extensive gastric resection is exemplified by one patient, aged sixty-nine years, on whom I performed successful, total gastrectomy more than two years ago and who was living and well at the age of seventy-two years. I have successfully performed extensive gastric resections for malignant lesions in the lower and middle thirds of the stomachs of many patients who were more than seventy-five years of age, and of one, eighteen months ago, who was aged eighty years. He is living and well at present. In many such cases a few days of preparation in the hospital before the operation has been of considerable value. The impression is that gastric carcinoma of elderly patients manifests its presence when the growth is in a fairly early stage, but this impression may be accounted for by the fact that, late in life, growth of the malignant lesion appears to be much slower than might be expected; therefore, the symptoms may have been present for some time but at exploration the growth is not found to be far advanced. On microscopic examination, most of the malignant gastric lesions removed from elderly patients are of a low degree of malignancy, and in most cases there is no involvement of lymph nodes; hence the prognosis as regards longevity is particularly good.

*The Palliative Treatment of Inoperable, Malignant Gastric Lesions.*—In considering the treatment of carcinoma of the breast, and its recurrence, Handley stressed the point that physicians must not be content to treat only the operable or curable cases of malignant disease, but that to employ any procedure which can be carried out for the patient with a recurring malignant lesion or with an inoperable malignant lesion, which will make the remainder of the patient's life more comfortable, is a duty. No better example can be found of the value of palliative measures than in the surgical treatment of inoperable carcinomas of the stomach.

Removal of a necrotic, ulcerating, bleeding lesion of the stomach, even though metastasis may be present in the liver, is a palliative



procedure worthy of consideration in dealing with a patient whose general condition warrants it. Similarly, in the presence of obstruction, gastro-enterostomy not only will bring relief of the distressing vomiting, but will enable the patient to take adequate nourishment, and these effects of the operation mean restoration of weight and improvement in general well-being. W. J. Mayo and Balfour both have directed attention to the fact that patients may live two, three, and four years in fairly good health following palliative removal of a malignant lesion of the stomach even if metastatic nodules are found in the liver at the time of operation. Hepatic metastatic growths seldom become sites of infection.

An ideal method of palliation, if complete removal of the lesion is impossible, is exclusion of the growth, as suggested by Balfour. This is done by dividing the stomach above the lesion and by anastomosing the upper, uninvolved portion of the stomach to the jejunum. In cases in which palliative resection or gastro-enterostomy seems inadvisable, jejunostomy can be performed for the purpose of feeding, and the patient's stomach can be kept empty subsequently by means of a stomach tube. Emphasis again should be placed on the fact that relief of symptoms and prolongation of life often can be afforded the patient with incurable carcinoma by treatment directed to these ends.

#### *Gastric and Duodenal Ulcer*

In the discussion of carcinoma of the stomach I emphasized the difficulties confronting the roentgenologist as well as the operating surgeon in determining whether certain small gastric lesions are benign ulcers or ulcerating carcinomas. Certainly an area of the stomach well beyond the lesion and including it should be removed. Should the lesion prove to be malignant, resection of the stomach, going well above the lesion and removing the glands and the gland-bearing areas in the gastrohepatic and gastrocolic omentum, is the operation which will give the greatest number of permanent cures. When the lesion is benign, excellent results have been obtained by excision of the lesion, by gastro-enterostomy, following which a stomal ulcer practically never develops, and

by gastric resection. Practically all benign gastric ulcers can be removed, and if the lesion proves to be benign, the preference as to the type of operation after removal of the lesion should be determined by the surgeon on the basis of the deformity of the stomach resulting from excision of the lesion and on the risk of performance of an additional surgical procedure, such as gastro-enterostomy or gastric resection, to permit rapid emptying of the stomach. I think it can be said without much argument that, when once it has been decided that a gastric lesion is a surgical one, the decision as to the type of operation to be used is a matter to be settled at the time of operation, since excellent results have followed the procedures mentioned in the treatment of benign gastric lesions.

It is not so easy, however, to discuss the differential surgical treatment of duodenal ulcers. The fact that most acute duodenal ulcers of short duration will heal under a proper medical regimen is an indication that the same possibilities of healing of chronic duodenal ulcers apply if adequate control of the acidity and emptying of the stomach can be obtained. To this end for more than thirty years the operation of gastro-enterostomy in the treatment of duodenal ulcer has proved to be, in the hands of experienced surgeons and in a properly selected group of cases, an operation giving excellent results. Reference to the literature of the United States as well as to that of England and France will bear out this statement. In the last decade, however, subtotal gastrectomy and partial duodenectomy, with removal of the ulcer, have slowly been gaining in popularity. This has been due largely to the fact that, in certain of the German and Austrian surgical clinics, where a 10 per cent recurrence of ulceration was reported following gastro-enterostomy, by substituting subtotal gastrectomy for gastro-enterostomy, they were able to reduce the incidence of recurring ulcer to approximately 1.5 or 2 per cent. After employing subtotal gastrectomy in a large series of cases, Finnisster, of Vienna, presented his material before various medical societies in the United States in 1922, and advocated the use of the operation as a routine procedure in the treatment of duodenal

ulcer. About this time reports were appearing in the literature from German surgical clinics, noteworthy among which was a report from Kiel by Anschütz and Konjetzny, and one by Puhl, of the constant finding of various degrees of gastritis in all specimens of stomachs removed during the course of subtotal gastrectomy for duodenal ulcer. Konjetzny's monograph on this subject is an outstanding contribution to the medical literature on gastritis.

The finding by these observers and by others in Germany of associated marked inflammatory changes in the walls of the stomach associated with duodenal ulcer led to the conclusion that gastritis preceded the development of duodenal ulcer, and it was but a step beyond this for them to reason that it was one of the etiologic factors in the development of duodenal ulcer. However, the etiology of gastritis continued to remain a speculative problem. Accepting the work of the German surgeons as being applicable to patients of other nationalities, Berg and Lewisohn, finding a larger percentage of gastrojejunal ulcers among their patients subsequent to gastro-enterostomy than had been reported from other surgical clinics in the United States, began performing subtotal gastrectomy in the treatment of duodenal ulcer. On various occasions during the past ten years they have reported that, by using this procedure, they have reduced the incidence of gastrojejunal ulcer among their patients from a proved 16 per cent, which it had been previously following gastro-enterostomy, to approximately 1.5 per cent. Although such a procedure was advocated by them and by a few other American surgeons, significant pathologic studies of the specimens removed were not reported until lately, and hence, in order to obtain information for comparison of the groups of cases on the basis of the pathologic nature of these lesions as compared with those encountered by German surgeons operating in Germany, Snell and I made a study of this problem in 1931, the results of which have been the foundation of several publications. To summarize our studies, we found gastritis associated with duodenal ulcer to be an almost constant finding in the specimens removed at operation in

various German surgical clinics during the time when we visited them in 1931. The same was true of an unselected group of specimens previously removed by Schmieden at Frankfort, by whose courtesy we were able to make pathologic studies.

As it was our impression that gastritis was absent in most cases of duodenal ulcer in which operation was performed at The Mayo Clinic, careful, detailed, pathologic studies were made of specimens of stomachs removed in the course of gastric resection at the clinic to determine the incidence and degree of gastritis associated with duodenal ulcer. In few of the specimens we examined was there gross evidence of gastritis, and when it was present it had been so reported. However, in view of the fact that the question arose in a recent paper by Aschner and Grossman regarding the presence of gastritis, which had not been apparent grossly in some of their cases but had been found on microscopic examination, Dr. Church and I, assisted by Dr. Wellbrock, examined microscopic sections of tissue removed from various parts of the stomach of patients in a group of cases of duodenal ulcer in which gastric and duodenal resection had been performed.

The series studied consisted of twenty-seven cases in which, during the course of removal of certain duodenal ulcers, it seemed advisable to perform subtotal gastric resection. These were cases of recurrent ulceration, of duodenal ulcer complicated by repeated and serious hemorrhages, and of high gastric acidity, in which the duodenal lesion was such that the procedure could be carried out without undue risk to the patient. The group of cases is small, but it was felt that certain determinations as regards pathologic changes and clinical progress should be made in comparison with cases in which gastro-enterostomy or pyloroplasty had been performed. The specimens were re-examined grossly: In three of the twenty-seven cases, gross evidence of inflammatory change was present; in two of the specimens, diffuse hemorrhagic gastritis was present with zones of ulceration in the gastric mucosa and, in the third, changes were even more marked and consisted of evidences of inflammation



and large serpiginous ulcerations. The other twenty-four specimens exhibited what appeared to be normal gastric mucosa.

It would seem, therefore, that we had obtained proof of a difference in pathologic changes associated with duodenal ulcer in the two groups of patients, namely, those operated on in Germany and those operated on at The Mayo Clinic.\* With the infrequent occurrence of gastritis in our cases, it would seem that gastritis as an etiologic factor in the development of duodenal or gastrojejunal ulceration is not of great importance; surely its presence was not necessary for the development of duodenal ulcer in our cases.

#### *Gastritis, A Phenomenon of Obstruction*

One might speculate at length as to why gastritis occurred among patients in Germany and not among those operated on in Minnesota. Differences in racial heredity, temperament, climate, habits of living, and nutritional states may play important parts in the problem. A similar difference in incidence in certain other types of lesions customarily treated by surgical procedures is apparent in different parts of this country, such as in cases of goiter, but there are certain factors, we believe, which might explain the development of gastritis among patients in Germany. Among these are the relatively late periods in the course of duodenal ulcer at which the German patient is operated on, and the apparently greater extent of duodenal ulceration among German patients. It was not uncommon to see among such German patients duodenal ulcers of extremely large size, which had produced marked degrees of obstruction of the duodenum and had penetrated into surrounding structures. That such ulcers are entirely the result of delay in treatment, we are inclined to question. The fact remains, however, that German patients had a much more severe degree of duodenal ulceration than those we are accustomed to see in The Mayo Clinic.

In speculating on this problem it occurred to us that, with large ulcers of this type producing pyloric obstruction, hypertrophy

of the gastric wall, with edema and inflammation, might result. A similar phenomenon of associated inflammation due to obstruction is well recognized in acute obstructions of the cystic duct by stone, which result in hydrops of the gallbladder with marked inflammation of its wall. We have recently seen ulcerating lesions in the mucous membrane of the gallbladder in a case of obstructive jaundice due to a malignant lesion of the pancreas and this, too, in the presence of an alkaline fluid. Returning, however, to the idea that gastritis might be a phenomenon of obstruction, it occurred to us that it would be worth while to remove sections of the stomach for microscopic examination when pyloric obstruction was present, both in cases of benign and malignant disease, and to contrast them with other cases in which pyloric obstruction was not present.

#### *Gastritis Associated With Obstructing Carcinoma of the Pylorus*

In reviewing our cases of duodenal ulcer in which ulcerative or hemorrhagic gastritis was an associated condition, it was noted that the duodenal ulcer was producing a considerable degree of duodenal deformity or stasis and that gastric retention was apparent clinically. We also had observed in many cases of obstructing carcinoma of the pylorus that thickening and edema of the gastric walls occurred proximal to the obstructing lesion. This led to the supposition that these changes in the stomach were inflammatory and the result of the pyloric obstruction. The interior of the stomach in these cases had the edematous, hemorrhagic appearance of gastritis. Following partial or subtotal gastrectomy, sections were removed from various parts of the resected stomachs; these were examined microscopically in twelve cases of obstructing carcinoma of the pyloric end of the stomach and revealed gastritis in eleven cases, or 92 per cent.

Interestingly enough eleven of the twelve patients were males, their ages varying from forty to seventy-seven years. In seven of the twelve cases the history of dyspepsia was of less than nine months' duration, and the longest history was of thirty years' duration. In all of these cases vomiting had been a marked symptom and marked degrees of gas-

\*It is of interest to note in this connection that Sebening, of Frankfort, who spent six months at the clinic, came to a decision similar to ours, namely, that gastritis occurred infrequently among patients with duodenal ulcer who had undergone operation at the clinic as contrasted with the almost constant presence of associated gastritis among patients operated on in Schmieden's clinic.

tric retention were demonstrated in most of the cases by gastric analysis. Free hydrochloric acid was present in nine of the twelve cases and was absent in two; in one case determinations of gastric acidity were not made.

*Gastritis Associated With Nonobstructing Carcinoma of the Pylorus*

In view of the finding of the high incidence of gastritis associated with obstructing malignant tumors of the stomach, it seemed advisable to study a control series of twelve cases of carcinoma of the stomach in which obstruction was not present. In all of these cases the malignant nature of the lesion was demonstrated by microscopic examination after its removal by partial gastrectomy. The lesions measured from 1 to 3 cm. in diameter. Grossly, gastritis did not appear to be present except within a radius of 1 cm. of the lesion. This was borne out on microscopic examination of specimens removed from various parts of the stomach in ten, or 83 per cent, of the twelve cases. The ages of patients in this group were similar to those in the other group, ranging from forty to eighty years. There were ten men in this group. Similarly, free hydrochloric acid was present in eight of the twelve cases, and a history of dyspepsia varied from two months to two years, although one patient gave a history of having had gastric dyspepsia for thirty years and another for five years.

*Experimental Production of Gastritis by Obstruction of Pylorus*

Working, therefore, on the hypothesis that gastritis is a phenomenon of pyloric or duodenal obstruction, Dr. Church and I have been attempting to produce lesions of gastritis in animals. The method employed consists in partial obstruction of the pyloric end of the stomach by constricting fascial bands. In half of the dogs in the group, gastric secretion was stimulated by administration of histamine. Work on these experimental problems is in too early a stage to allow any definite decision to be reached regarding the efficiency of our method of producing partial pyloric obstruction. It is our hope, however, that we may be able, by one method or another, to produce lesions of gastritis subsequent to the formation of pyloric obstruc-

tion, and also to determine whether or not relief of the obstruction by gastro-enterostomy will cause the gastritis to disappear.

While we were studying this problem, Dr. Dragstedt, of Chicago, presented in a Mayo Foundation lecture some interesting data on experimental production of peptic or, as he called them, "acid ulcers" of the stomach. As a complete report of these studies undoubtedly soon will be published by him, we feel that only the briefest reference to his material should be made at this time. By producing, experimentally, an isolated gastric pouch, he obtained pure gastric juice from it through a metal cannula. By closing the cannula, obstruction to the flow of gastric juice from the pouch resulted in development of chronic, progressive, perforating ulcers, anatomically similar to clinical lesions. Quoting from Dragstedt: "In one experiment in which pneumonia occurred forty-eight hours after operation, several superficial ulcers were found, and the entire mucous membrane presented numerous small hemorrhagic erosions." Our interpretations of his deductions are that ulcerations of the stomach and duodenum are produced by the irritating action of pure gastric juice, with a concentration of free hydrochloric acid of 50 units or more (between 0.1 and 0.15 per cent), on a gastric wall the physiologic function of which is interfered with as a result of obstruction.

This contribution of Dr. Dragstedt's appears to us to be of outstanding value. It lends further support to the work of Mann and Bollman, and others, who previously have emphasized the importance of the acid factor in the production of experimental gastric and duodenal ulceration. It supports directly our own contention that gastritis is a phenomenon of pyloric or duodenal obstruction, but further, and from a practical standpoint, it would lead to the conclusion that any reduction in the incidence of gastrojejunal ulceration obtained by subtotal gastric resection, under and below that following gastro-enterostomy, is due to a greater reduction of gastric acidity occurring subsequent to subtotal gastrectomy.

*Summary*

Carcinoma occurs more commonly in the stomach than in any other organ of the



body, and affects men three times more commonly than women. The symptom of common occurrence is persistent dyspeptic discomfort.

Carcinoma of the stomach can be detected by a competent roentgenologist in 95 per cent of cases, but the roentgenographic diagnosis of benign gastric ulcer does not exclude the possibility that the ulcer may be carcinomatous, nor does the diagnosis of benignancy on gross examination exclude this possibility.

The prognosis in the surgical treatment of carcinoma of the stomach is dependent on the degree of malignancy of the lesion and on the presence of involvement of lymph nodes. In 1,000 consecutive cases in which carcinomas of the stomach were removed at The Mayo Clinic, three-year cures were obtained in 52 per cent of the cases in which there was no involvement of lymph nodes but in only 19 per cent of cases in which the lymph nodes were involved.

Exploration is indicated for every tumor of the stomach, provided the patient's general condition permits and unless proof of unremovable metastatic growth exists.

Because many gastric ulcers are benign, many of them will heal under a proper medical regimen. The decision to treat such lesions medically, however, carries a great responsibility. If the lesion is malignant, by the time it is found to respond unsatisfactorily to medical treatment, sufficient time may have elapsed for it to become inoperable. Medical treatment should be carried out with the patient in the hospital and under observation for several weeks, and subsequently frequent examinations of the stomach should be made. Even in cases in which excellent progress is made under medical care, the patients should be advised to return at frequent intervals for examination.

A gastric ulcer may be found to be malignant on microscopic examination even though it has all of the roentgenographic and grossly pathologic aspects of being benign.

The elderly patient with a malignant gastric ulcer should not be denied the benefits of operation. Successful, subtotal or total

gastrectomy has been performed on patients who were between sixty-five and eighty years of age.

Palliative treatment of inoperable gastric tumors should be directed toward relief of pain and obstruction and toward improvement in general condition. Removal of necrotic, ulcerating lesions is justifiable in selected cases even in the presence of hepatic metastasis. When removal is impossible, the exclusion operation of Balfour affords ideal palliation.

In microscopic examination of specimens removed from stomachs resected during the course of operations for duodenal ulcer, associated gastritis was found in but few instances. In studies made of obstructing gastric lesions, it appeared that gastritis occurred in association with pyloric obstruction in a high percentage of cases and was absent when pyloric obstruction was not present. To confirm this clinical impression, a group of cases of obstructing carcinoma of the stomach was studied and microscopic evidence of gastritis was found in 92 per cent of the cases. A study was made of a control group of patients who had carcinoma without obstruction, who were of similar age and distribution by sex, and whose symptoms were of similar duration. Gastritis was absent in 82 per cent of cases. Studies are in progress at the present time to determine whether gastritis can be caused experimentally by producing various degrees of pyloric obstruction with fascial bands.

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## CANCER OF THE BLADDER\*

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The purpose of this paper is to call your attention to three things, (1) the necessity for the medical profession considering hematuria, especially painless hematuria, more seriously, (2) the advantages of beginning treatment on bladder tumors when they are yet small, and (3) the treatment of bladder tumors.

An extensive survey of the literature on bladder tumors and hematuria leads me to the opinion that any mature urologist is a hopeless optimist who expects to accomplish very much by urging the medical profession to have all of their patients with unexplained hematuria examined immediately by cystoscopy. I begin by making that confession. Since the perfection of the cystoscope, this matter has been urged upon the profession thousands of times, without effecting any remarkable change in the length of the period between the appearance of the hematuria and a satisfactory urological examination.

For this failure we must blame the family physician, the patient, and the cystoscopist. The attending physician is relieved of blame if he *honestly* (and I mean honestly) urges the patient to have the examination and explains to the patient's family that sick people are not capable of making decisions so that it is the duty of the family to help the patient to a wise decision. The patient is freed of blame only if he is ignorant of the need for the examination, or, if being sick

and perhaps in pain, he has an unwarranted fear of cystoscopy which he cannot overcome. The long illness which goes frequently with progressive, uncontrolled cancer of the bladder, the suffering which is shared by sympathetic families, the sacrifice in time and energy which the family must make in nursing these patients, and the great and long drawn out expense are all reasons for the patient submitting to cystoscopy whether he dreads it or not.

The cystoscopist only frees himself of blame when he shows by his gentleness, skill, and sympathy that cystoscopy can be done without shock and with little or no pain. There is small excuse for the skilled cystoscopist, and none for the unskilled, failing to prepare his patients for examination by such measures as are now available to make the examination sufficiently free of pain. I take this opportunity to assure you that such examinations can be done safely, without pain if we go about them properly.

Painless, gross hematuria is, of course, the first symptoms of bladder tumor most frequently discovered by the patient. Although great stress has been laid upon the importance of an immediate examination when painless hematuria is discovered, it is usually not an early sign of bladder tumor; it appears usually only after the tumor has become rather extensive. Microscopic hematuria must frequently occur before the gross hematuria appears—perhaps long before. But at what stage in the growth of the tumor it first appears is a matter not yet discovered; earliest perhaps in the ulcerative types of carcinoma, many of which are quite malignant, so that unexplained, microscopic hematuria must also be thoroughly investigated.

### Treatment

To conserve time it will be best, perhaps, to discuss the advantages of treating bladder tumors when they are yet small along with the treatment of the bladder tumors.

I have found many to agree with me, that a minimum standard for the treatment of cancer should be set up. I recognize fully the difficulty in employing even a minimum standard of treatment in a good many patients. First, because neither the patient, nor the attending physician, is easily convinced

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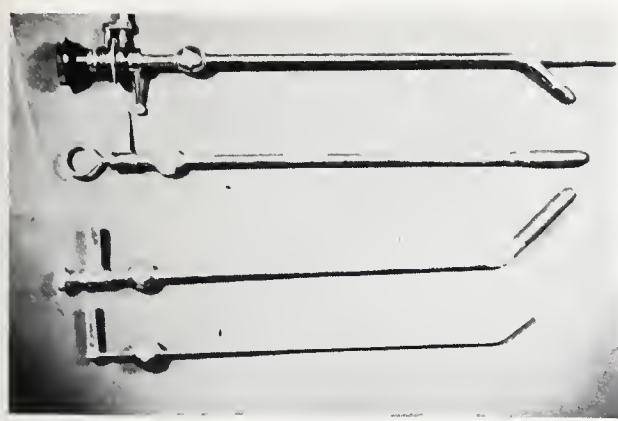


Figure 1.

The instrument at the top is the Young rongeur with which specimens of the bladder growths are obtained for biopsy. Just below it is the Buerger radium cystoscope and one of the especially constructed needles which I employ for planting the gold seed in and about the bladder tumors. The needle just below is the needle ordinarily employed for this purpose and it can be seen that it is larger than my needle. My experience is that it causes too much bleeding. The instrument at the bottom is the electrode employed for destroying some bladder growths with electric coagulation.

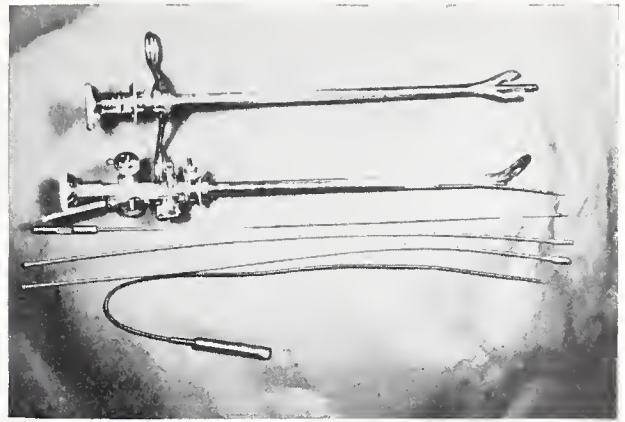


Figure 2.

The instrument at the top was devised by Dr. Hugh Young for applying radium to the surface of bladder tumors. Ordinarily two hundred milligrams of radium are placed in the rubber covered capsule at the end of the instrument (which is shown here turned downward) and the application is made while the operator looks through the cystoscope which as you see is passed through the instrument. It is then held in place for the necessary time by a mechanical arm fixed to the cystoscope table. Below are other forms of applicators for radium treatments administered through the urethra or by rectum.

that the measures proposed for treatment are really essential—they seem far too radical. Secondly, the expense of the necessary treatment is, with our present facilities, far greater than many patients feel that they are prepared to meet.

From the articles which have been written on the treatment of cancer of the bladder and the results, it is very evident that the urologist occupies a somewhat similar attitude about the treatment of such growths, to that which is held about the treatment of cancer in other parts of the body by those who are familiar with cancer there. That is, that in dealing with such a fatal disease, anything short of treatment sufficiently radical to at least offer hope of a complete cure is certainly not to be recommended. There are circumstances, naturally, which make it excusable to employ inadequate measures. For example, a lack of access to the necessary facilities for treatment of patients who do not have sufficient money to enable them to go where they can be treated properly.

As far as the general practitioner is concerned, cancer of the bladder is an extremely rare disease and he knows very little about what treatment is needed for such cases. In my many years of urological practice I have seen almost a hundred patients with cancer of the bladder, and a good many of those came to me through the Steiner Clinic in Atlanta. Some of these patients were not bene-

fited by what I did for them because I did not have sufficient experience nor adequate facilities for treating the disease, more recently because I have not been free to employ procedures as radical as I have advised. The more radical procedures including cystectomy seem, to those who know little about the operations and less about the possibilities which they offer, terribly mutilating procedures until they are confronted by a patient who is suffering with cancer of the bladder so that he is willing to do anything in the world to obtain relief.

It is so unfortunate that ignorance, concerning cancer of the bladder and what can sometimes be done by treatment, permits far too many patients to reach an advanced stage where it is rarely possible to do much for them even by cystectomy, the most radical procedure. It seems that as long as the patient is not really suffering and the doctor is unfamiliar with the benefits of the more radical procedures, including cystectomy, it is almost impossible to persuade patients to undergo radical operations. In fifteen or twenty years I can assure you that cystectomy will be far less dreaded and far more frequently performed.

Sometimes, it is true, unsuccessful treatments by radium and operations make these patients worse. But how are we going to tell when treatment is not going to result in an enormous relief from suffering even

if it does not cure the patient? I have in mind two excellent illustrations of how treatment succeeded after the bladder growth had reached such an advanced stage that I thought that treatment would probably be useless. Both patients are women; one had a cancerous involvement of the posterior bladder wall from the neck of the bladder to above the trigone with a thickened bladder, foul urine, and an ulceration several centimeters in diameter; the other, had infected urine and multiple small tumors and a larger one several centimeters in diameter. Both were treated by deep x-ray therapy and the implantation of radium emanation in gold seed through a suprapubic cystotomy. Although the first patient is still wearing a suprapubic drainage tube they are both comfortable and very grateful for being able to live so long and so happily after they had given up all hope. On the other hand, patients having growths offering greater hope of success from treatment which they received have grown steadily worse, suffering much, and died. However, many of these cases would now receive far more radical treatments than I employed at that time, and I believe that on the whole I would have had greater success.

The minimum standard of treatment that I have set up for myself is: 1.—*Deep x-ray therapy* for all patients in repeated courses, no matter whether the growth is radiosensitive or not. The treatment should be continued at suitable intervals until it becomes evident that x-ray therapy is of no advantage.

2.—*Transurethral Treatment*: Cystoscopic, transurethral treatment of all smaller growths of the less malignant, papillary carcinomatous type, especially the villous growths, by electrocoagulation and the implantation of radium emanation in gold seed in and about the base of the tumor. The amount of the radium emanation employed to be determined by the site of the growth, its size, and perhaps, its radiosensitivity. One millicurie to slightly less than each cubic centimeter of tissue could be considered an average dose.

3.—*Suprapubic Cystotomy*: Treatment of the cancer should be undertaken through a suprapubic opening where any doubt exists

as to the ability of the operator to obtain adequate results by transurethral treatments. This would be when tumors were resistant to electrocoagulation even when treated with radium, when the position of the growth prevented the implantation of seed with sufficient accuracy, when a doubt existed as to the extent of the growth into the bladder wall, and in all instances where growths invading the bladder were so situated that the area of the bladder involved could be resected with reasonable safety. For radioresistant growths greater effort should be made to employ resection than in the radiosensitive ones.

Where resection is not clearly indicated, the tumor should be removed by electrocoagulation or electric resection to the level of the bladder mucosa and the base of the growth and the area about it planted with radium emanation in gold seed.

4.—*Radical Resection*: Radical resection of the bladder, even including the ureteral orifice region, should be selected when possible for growths which do not show evidence of being definitely radiosensitive, provided metastases cannot be demonstrated, and there is reason to believe that the patient will live ten years or longer if a local cure is obtained. If the ureter cannot be transplanted it should be tied off, or brought out through the skin, and a nephrectomy done later if the patient has a good kidney on the other side; if not, a nephrostomy can be done instead of a nephrectomy.

5.—*Cystectomy*, preceded by nephrostomy should be selected for patients having extensive involvement of the bladder, with the growth more or less limited to the bladder, provided there is a hope of obtaining a cure. The patient should be of such an age that he has a life expectancy of at least five years or longer if relieved by the operation.

6.—*Double nephrostomy*, or nephrectomy on one side and nephrostomy on the other, for patients with extensive, incurable, painful carcinoma where diversion of the urine offers hope of giving the patient even a few months of relief from the suffering which so many of these patients experience.

The value of treatment of the cancerous growth by radiation with x-ray and radium



depends, as you well know, upon the susceptibility of the particular tumor to radiation—some are very resistant, others very susceptible. Of course, the maximum effect of radiation can be obtained only by radium, and really only by planting gold seed into the cancer. You can readily understand this, and of course, you are familiar with the fact that x-ray therapy cannot be applied in such a fashion as to deliver at bladder depth a sufficient dose to completely destroy a cancerous growth. Nevertheless, I have seen instances in which, without other treatment, there has been an enormous decrease in the size of the tumor, and in one instance, a tumor 3 to 4 centimeters in diameter almost completely disappeared in six weeks after a course of x-ray treatment. Therefore, on account of the benefit which may be derived from x-ray therapy, and almost regardless of the other treatments employed, it is essential to treat all malignant growths of the bladder with deep x-ray therapy, and not only with one course but with many.

Radium should be used not only in definitely malignant growths, but also in tumors of doubtful malignancy, and even at times in tumors which are considered benign tumors—the tumor being destroyed by electrocoagulation and the base planted with radium emanation in gold seed. In radioresistant tumors, which cannot be benefited by surgery, I believe that in most instances we are justified in employing maximum doses of radium, if there is the slightest evidence that benefit may follow. It cannot be too frequently repeated that when radium is employed in the treatment of these growths inadequate initial treatment usually destroys the chance of obtaining cures with radium later on.

Statistical data show that radical resection of the bladder for cancer has afforded the best outcome of any of the measures employed for treatment. I am so convinced of the efficiency of radical resection that if I had a cancer of the bladder I would not hesitate to have an extensive resection of my bladder, even if the ureter could not be transplanted and a nephrectomy were necessary.

The great relief afforded hopeless cases of bladder cancer from diverting the urine from

the bladder is illustrated by one of my patients—a woman with extensive, uncontrollable cancer of the bladder about 5 by 7 centimeters in diameter. The tumor which was only slightly radiosensitive was first treated by planting gold seed through a suprapubic incision (7,992 mc. hours). About one month later a severe infection of the right kidney had to be relieved by nephrectomy. But her suffering continued because of the urinary drainage from the left kidney, and she drove everyone about her distracted. Two months later the urine was diverted from the bladder by a left nephrostomy and the patient very soon became almost free from pain. She went home, even visited friends away from Atlanta, and lived for about six months fairly happily in spite of extensive metastases.

In treating these patients there is an economic problem to which the medical profession needs to give some attention. Let me ask these questions: From the patient's standpoint, and necessarily therefore from that of his family, is it not better to undergo the most radical treatment for cancer even if the mortality risk is greater, than to live for months, and sometimes years, through an illness which not only causes great suffering by the patient and his family, but exhausts them financially? From the physicians viewpoint, would it not be far better for him and for the patient to have a hospital, let it be a state institution as in Iowa, if you please, where such patients could go and receive this maximum radical attention at a moderate expense, and where they could return for deep x-ray therapy at moderate cost?

The present cost at the now available hospitals for such services—of hospitalization, operations, deep x-ray therapy, and adequate radium therapy—practically exhausts the financial resources of people of moderate means. As a result there is no money left for further x-ray treatments, nor for paying the family physician for his services. And if the results of the operation and treatment are ineffective and the patient dies, the family physician who treated the patient at home is left not only without being paid anything, but with having paid out of his own pocket for gasoline, tires, and oil which he has ex-

pended in visiting the patient, and often for medicines as well. Furthermore, if the resources of the family are exhausted by expensive and unsuccessful attempts at treatment, the family doctor then has to continue his services when called upon to the other members of the family without payment until they can recover from these expenses.

We who practice almost entirely in offices, hospitals, and crowded cities have given little thought to how much time and money our fellow doctors, who practice in widely scattered homes, lose as compared to our losses. To see patients at hospitals and offices costs us little because we visit these places anyhow, and in the larger cities the poorer people are cared for in out-patient clinics and hospitals at the expense of the community.

The existence of such conditions explains in part why patients are so reluctant to go, and their family doctors to send them, to medical centers where such expenses are incurred. Nevertheless, it is, as you must see, far cheaper and better in most instances to send the patient for the most thorough treatment at the earliest possible moment.

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*Discussion on Paper by Dr. M. L. Boyd*

DR. W. POPE BAKER, (Atlanta): I have a particular interest in this subject since I have treated many of Dr. Boyd's private patients with carcinoma of the bladder at the Piedmont Hospital and have carried out as far as possible the plan for deep x-ray therapy outlined by him. In treating cancer of the bladder, the duration of the x-ray series is usually twelve days to two weeks. I use the divided dose method and give four to six weeks. The idea in repeating the dose coming every other day. This may be repeated in four to six weeks. The idea in repeating the dose is to keep the tumor saturated with x-ray. This method is known as the Coutard method.

Anterior and posterior portals of entry of 20 cm. are used and also frequently a perineal part of 13 cm. The amount of x-ray given is 800 R units on each part. Some men use larger doses but with the type of machine which I use, the above dosage is sufficient to redden the skin and produce a tanning in about three to six weeks.

The immediate reaction to x-ray is variable and rather interesting. Some patients complain of nausea which lasts from twenty-four to forty-eight hours, others complain of headaches, drowsiness, nervousness and diarrhea. While still others seem to be boosted up and feel better during the course of treatments. The amount of reaction probably depends upon the physical condition of the patient and the dose, but in patients with cancer of the bladder, the reaction is

usually much milder than when treatments are given higher up in the abdomen. The nausea may be controlled effectively with two drams of dextrose, in orange juice, three times a day. The headaches are usually mild and the diarrhea is not difficult to control.

If metastases are present, they also are treated using an erythema dose in the area where it is needed. I believe Dr. Boyd will bear me out. The results which I have obtained in employing the water cooled type of tube have been as far as we have been able to determine, quite as satisfactory as one would expect to obtain with deep x-ray therapy.

DR. RICHARD BINION (Milledgeville): I want to discuss this paper, not because I know very much about cancer of the bladder, but because I had a patient who has made an apparent recovery after a year and a half. This lady had a massive involvement of the posterior wall of the bladder. Some three and a half years ago, this intelligent lady, consulted me for hematuria which she had suffered for two years and about which she had never said anything. The real cause of her coming to a doctor was not hematuria, as she had gotten used to that, but she was beginning to develop some discomfort and pain. She was persuaded to come in and have her bladder looked into, and I found something which I was unaccustomed to seeing, so I asked her to consult Dr. Boyd. She would not do that so I had to carry her to see Dr. Boyd. He examined her and found a rather extensive involvement in the posterior wall of the bladder. Dr. Boyd gave me a pessimistic outlook, and it was a rather serious situation for all of us. The patient was from New York and had no relatives in this part of the country to look to for advice or help, and she was rather opposed to having anything done. We had to be a little severe with her in telling her about the prognosis.

Finally we persuaded her to begin treatment. Dr. Boyd went after the thing heroically. First, he electrocoagulated the mass and destroyed a great deal of it. Rather than have her go back home, we put her in our hospital at Milledgeville, where she stayed for some time.

She had declined physically, her red blood count was less than two and a half million, and hemoglobin was around 50 per cent.. Some few weeks after the transureteral desiccation, she returned to Dr. Boyd, who had Dr. Baker give her deep x-ray therapy. She continued to improve. After waiting a few weeks she went back to Atlanta, and Dr. Boyd decided, and wisely so, to do a suprapubic cystotomy, with implantation of radium seed. This was good judgment, because there were multiple carcinomatous growths in the bladder. He carefully planted seed throughout the bladder.

It has been a year and a half since she went to Dr. Boyd. She lost some three or four months from her work, but is now back at work, apparently in good condition. Of course we know she is not well, but she is able to carry on and appears much better than she was before treatment began.



DR. G. G. ALLISON (Atlanta): There are several points I should like to bring before you. Dr. Boyd has made them clear, yet repeatedly I hear from physicians who feel that a suprapubic cystotomy tube or nephrostomy tube is entirely too painful, and that it is messy. I do not know of anything that works better, if it is properly done. There is but little discomfort and pain to the patient, when a proper cystotomy tube is placed in position and kept clean.

It is the urine dribbling over an irritable area that causes most of the pain. If this is diverted and the bladder distension is kept down, certainly the patient is far more comfortable. Again, may I urge that the patient with unexplained, painless hematuria, be examined early, if you expect to do anything for that patient.

DR. W. L. CHAMPION (Atlanta): I did not want this opportunity to pass without thanking Dr. Boyd for this valuable paper. He has an opportunity at Grady Hospital to see and treat more patients with cancer of the bladder than anyone around this section of the country.

I know of no condition that a human being can suffer from more than a cancer of the bladder, and if anything can be done to make these patients comfortable, which Dr. Boyd has outlined here, I think it should be employed.

DR. MONTAGUE L. BOYD (Closing): I just want to say one additional word, and that is this: If I could persuade any one, two, or three of you who see patients with painless hematurias to send them in for cystoscopy, I would feel I had accomplished something.

I am going to take the liberty of adding something which perhaps I should not mention. Last night I was talking to a surgeon for whom I have great respect, one of our best Georgia surgeons. He told me that he had two cases of painless hematuria that he was observing—waiting to see what was going to happen to them. One of them he had seen for six months, and the other one longer.

I tell you this to illustrate the thing which was the most important in my paper, that we are not treating patients with painless hematuria fairly when we do not send them for cystoscopy.

I thank you all for your discussion.

#### THE THERAPY OF THE COOK COUNTY HOSPITAL

Sanford R. Gifford (Journal A. M. A., July 7, 1934), discusses the therapy of conjunctivitis as it is practiced by the members of the attending staff of the Cook County Hospital. The phases of the subject discussed include: conjunctivitis due to chemicals, acute catarrhal conjunctivitis (pink eye), gonorrheal conjunctivitis (ophthalmia neonatorum) and chronic catarrhal conjunctivitis.

#### UNDERLYING PRINCIPLES IN THE REPAIR OF DOUBLE HARELIP\*

FERDINAND C. LEE, M.D.

*Augusta*

Fortunately the condition of double harelip is not common. In fact Ritchie, in his recent excellent article on congenital clefts of the face and jaws, reported bilateral complete harelip, alveolus and palate in only seven, or 2 per cent, of 350 cases. Rosenthal found a double complete harelip in 7 per cent of the cases which he studied. Veau had simple bilateral harelip in 7 per cent and total bilateral cleft in 12 per cent of his cases. The variation of incidence is probably due more to nomenclature than to any other factor and it is believed that as soon as surgeons adopt some standard method of classification, like the one suggested by J. S. Davis and Ritchie, statistics on congenital defects will really mean something.

Congenital defects in lip, palate and alveolar process occur only once in every thousand births (Armbrecht, J. S. Davis, Rosenthal). However, it is surprising that congenital defects, taken as a whole and irrespective of their nature or location, are so common. J. S. Davis stated that after reviewing over 28,000 cases of deliveries at the Johns Hopkins Hospital there was one congenital defect in every thirty-three babies.

There is no need to point out the seriousness of a double harelip for the future happiness of an individual, particularly when the child happens to be a girl. It is undoubtedly true that many a life has been made almost unbearable because of a facial defect such as a double harelip. But since these defects are infrequent, the proper operative care has not had the study which more common surgical conditions have afforded. Many of these unfortunate patients are not in a position to be sent to large medical centers where plastic surgery is a specialty.

The purpose of this article is to present fundamental underlying principles in the repair of a double harelip so that the surgeon who only occasionally is called upon to op-

\*Read before the Medical Association of Georgia, Augusta, May 10, 1934.

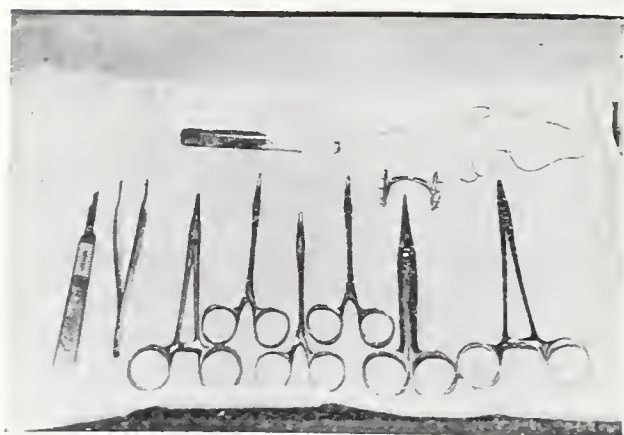


Fig. 1

erate on such a condition may approach his task not only with possibly a better understanding of the principles involved, but also be watchful of the errors which may be avoided. In going through the literature which has accumulated on this subject since 1900, it is plain that a standard, generally accepted operation for this condition has not yet been evolved. It is, therefore, with little reserve that a modification of several of the common procedures that have been used for the cure of double harelip is submitted herewith.

Probably the greatest trouble with repair of a double harelip has been the failure of the suture line to hold. Many a surgeon has left the operating room feeling that the double harelip which he has just operated upon would probably give a good cosmetic result, only to find that the suture line has completely broken down on the fifth day after operation. Once the operator becomes confident of securing primary union he can readily improve by a second and very much more minor operation the slight irregularities which the first operation usually leaves in its wake. Other complications and difficulties will be taken up as the steps in the following operation are described.

#### *The Operation*

The early operation for double harelip is not only justified but highly desirable. Not only is the child benefited by the use of a mouth for nursing and of a more natural opening for breathing, but also because a properly performed operation will promote the proper alignment of pre-maxilla and do more toward restoring the outline of the

alveolar process than many ingeniously conceived operations on these respective structures. Aside from the benefits to the patient, the parents of the unfortunate child are spared much unnecessary, protracted anguish.

Although it is necessary to operate early it is not justifiable to operate until the baby's weight curve is definitely rising and the child weighs at least as much as at the time of birth. Any complications, such as acute otitis media and an acute pharyngitis, should be taken care of before any operative measures are attempted. Usually the operation can be undertaken two weeks after birth. No preliminary treatment is necessary except that food should not be withheld more than three hours before the patient is taken to the operating room. Whenever possible the services of a pediatrician should be enlisted, but if no such expert help is available the surgeon may continue without anxiety.

The care of the pre-maxilla before operation has given rise to numerous different procedures. Obviously the removal of this whole structure as has been advocated (Bates) seems now to be out of the question and should not be practiced because the child would then have a deformed upper lip which can only be improved with the greatest difficulty (Veau). Nor is it necessary to resect a portion of the vomer in order to push back the pre-maxilla into the proper alignment with the maxilla. In fact, it is doubtful whether the very forcible pressure which some surgeons put on the pre-maxilla to put it back in proper alignment before operation is necessary. It seems that the muscular action of the orbicularis oris muscle is primarily responsible for the adjustment of the pre-maxilla in a properly performed double harelip operation (Ritchie, Blair). In the cases here reported a moderate pressure was exerted on the pre-maxilla at intervals before operation but it was felt that this exhibition of force did not do any good and should be abandoned.

In our experience, either administered by a motor driven insufflation apparatus is quite satisfactory, after the patient has been anesthetized lightly with the ether cone. It is always desirable to have the baby placed on



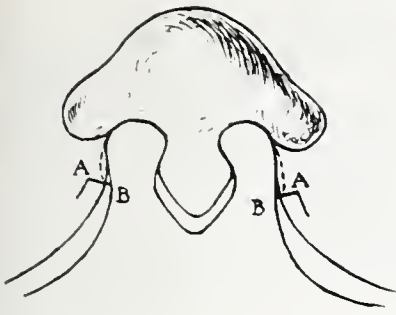


Fig. 2

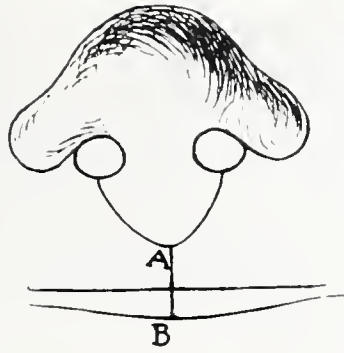


Fig. 3

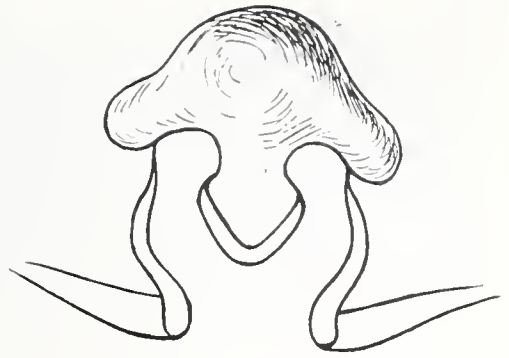


Fig. 4

an inverted instrument tray which conceals a hot water bottle. In this way the temperature of the child is maintained, and shock is guarded against to a great extent. It is important that the anesthesia be light at all times, deep enough to prevent movement of the head. The operation should not take longer than an hour.

A satisfactory disinfection of the operative field is impossible and of minor importance. Swabbing the lower face with alcohol and applying this solution gently to the mucous membranes of the lips and alveolar process is sufficient. Desirable as it may be to have delicate small thumb mosquito forceps, fine hook retractors, and other highly specialized instruments for plastic surgery, it may be comforting to know that the instruments pictured in figure 1 are sufficient for the operation.

The first step in the operation is to insure symmetry by placing a single stitch of silk as a marker in the mid-line of the pre-maxilla at its free edge after a small bit of vermilion border has been removed from that region (C, fig. 5). Then two other silk sutures as markers are placed through the upper lip at each nostril but inferior to the point where the lip is to be cut across. These silk sutures serve not only as markers but they are also temporary traction sutures used to bring the newly formed lip together near the mid-line during operation only.

It is very important that both sides of the upper lip be under-cut near the alveolar process, care being taken to remain close to the bone and avoid damaging the soft tissues of the cheek. However, the extreme under-cutting in which the incision is carried to the inferior border of the orbital fossa is unneces-

sary and detrimental. It is doubtful whether it is necessary to cut out wedges from the cheek to insure sufficient relaxation for suturing (Durham). The slight amount of bleeding which follows the under-cutting can be temporarily arrested by packing. An incision is then made in each lateral part of the upper lip, according to figure 2. The idea of this incision is to use as much as possible of the lip already formed, and to cut across substantial portions of the orbicularis oris muscle.

The incision is marked by the letters A-B in the above figure. If the condition is not severe the A-B incision alone may be sufficient to afford relaxation in order to bring the respective segments to the mid-line of the face. However, it is usually necessary to extend the incision almost parallel with the vermilion border, and the extent of this second part of the incision is dependent entirely upon the approximation of the newly formed flaps marked A-B in figure 3. This figure is intended to represent the visualized finished operation. It is desirable to have a slight redundancy at B; the excess tissue contracts down and gives a better result.

The very small amount of crimson border which is superior to the line A-B is then removed with a scalpel, care being taken not to enter far into the nostril. There will be slight bleeding from the incision made in the upper lip and it is better to clamp the bleeding vessels with fine artery clamps and leave the clamps in place, rather than to tie off the vessels. By the time actual suturing is necessary the clamps can be removed without fear of hemorrhage.

After the remaining thin vermilion border on the pre-maxilla has been carefully removed, care being taken to leave as much

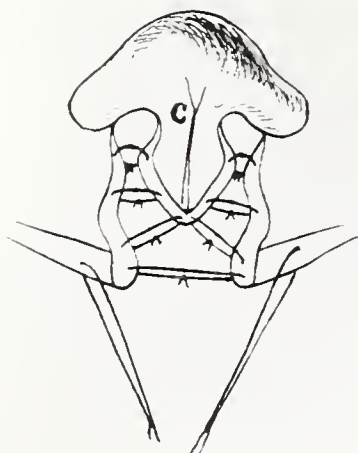


Fig. 5

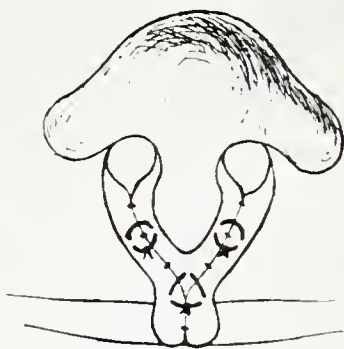


Fig. 6

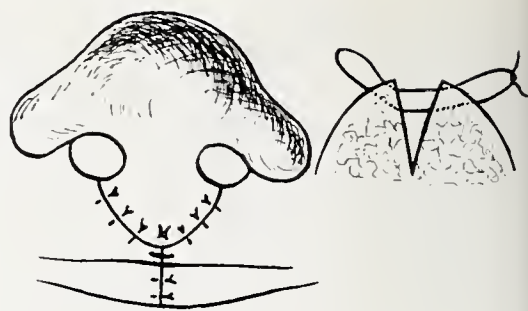


Fig. 7

normal skin as possible, the lateral parts of the new upper lip are brought together in the mid-line to see whether enough relaxation is present, since thorough and complete relaxation of these lateral pedicles is essential to the repair. Obviously, undue tension on these flaps will vitiate any possible union in the mid-line. As every plastic surgeon knows, tension and perfect healing are not compatible. The radical V shaped removal of much of the skin on the pre-maxilla is probably unnecessary because it seems more reasonable to conserve as much of the tissue at hand as possible.

Suturing is now begun. It is felt that, relatively small as the tissues are, almost three layers are absolutely necessary. The appearance of the denuded edges which are to be approximated is shown in figure 4. The first row of sutures is of silk and is placed with a number three French needle, which is indispensable for neat work. These sutures are placed first at the nostril of one side, and they approximate the posterior and deeper aspects of the opposing raw surfaces. The suturing consists of uniting the mucous membrane of the under side of the upper lip with the mucous membrane of the pre-maxilla (figure 5). Suturing is done so that the knots are situated on the mucous surface; the threads are cut short. These stitches later on come out by themselves and never have to be removed. The interrupted suturing is carried anteriorly to the free margin of the newly formed lip, the sutures being placed substantially into the lip and into some of the fibro-cartilage in the pre-maxilla if necessary.

The second row is not as complete as the

first row, but it is very important since it is placed in the muscle tissue. It consists of three interrupted sutures of 000 plain catgut placed as follows: The first suture is put well into the remaining upper lip and into the pre-maxilla, thus getting a good purchase on the tissues comprising the essential portions of the pre-maxilla and denuded surface of the upper lip. A similar stitch is placed on the opposite side. Finally a third stitch is placed at the apex of the pre-maxilla at its junction with the two flaps (figure 6).

The third row of sutures can be either of horse-hair or of silk, and consists of bringing together the skin anteriorly. In order to insure neat approximation and a small scar it is advantageous to use a suture like an end-on-mattress stitch as illustrated in figure seven. Into each nostril an inch long piece of a number eight French, soft rubber catheter is inserted and held in place with a suture into the nostril to insure patency.

As a final dressing, compound tincture of benzoin boiled down to a soft putty-like consistency is applied to the sutures in the skin. Blair favors no dressing, but insists on frequent cleansing of the incision with a mixture of equal parts of alcohol and saturated aqueous solution of boric acid.

Obviously the most important feature of the post-operative care is to keep the child quiet so that rest for the operative site is assured and healing can take place unhindered. The first maneuver to this end is to apply a Logan bow which is attached by means of adhesive strips to the cheeks immediately after operation. This appliance aids materially in preventing undue tension





Fig. 8.—Case 1, Five months after operation.



Fig. 9.—Case 2, Two months after operation.



Fig. 10.—Case 3, Before operation.

in the suture line and may be left on for two weeks, but it is doubtful whether it causes as much immobilization as would first appear. For, after all, keeping the skin from moving, as this apparatus aims to do, is only one of the two moving elements concerned, the other factor is muscle, not only of the orbicularis oris, but also of the other muscle of the face, like the zygomatic and buccinator which are inserted only partly into the skin, but for the most part into the orbicularis oris muscle. Accordingly, contraction of these muscles will cause great strain on the suture line, and skin immobilization will help very little to prevent this tension. The buccinator muscle in particular will be free from much immobilization as far as the Logan bow is concerned.

Again, therefore, the most important feature of the post-operative care is to keep the muscles of the face at rest, and to this end a sedative, such as sodium bromide, given as much as three grains every two hours, may be necessary. This drug need not be given for more than about seven days and in lessened amounts as the post-operative interval increases. The sole criterion for the amount of this drug necessary is the restlessness of the child. It is felt that keeping the patient quiet after operation is more important than the use of the Logan bow.

The baby should be fed at the regular intervals which are normal for its age. The food may be given by means of a medicine dropper to which the terminal portion of a soft rubber catheter has been attached. Sutures frequently will come away with the compound tincture of benzoin, but they can be removed at any time after the sixth day. As usual with double harelip patients, minor corrective operations may have to be per-

formed to adjust possibly the vermillion border or to excise portions of a broad scar. These operative measures should be done within three months of the original operation. Massage of the scar and nursing should not be allowed until five weeks after operation.

#### *Report of Cases*

During the winter months of the school year, 1933-1934, three cases of double harelip presented themselves at the University Hospital at Augusta, Georgia, and were operated upon according to the method described. The results in these cases are shown by the accompanying photographs, all of which were taken after the first operation, and none have been re-touched.

Case 1.—This patient had a complete operation for double harelip, alveolar process and palate. The photograph was taken 149 days after operation and shows fair symmetry of the nostrils, a slightly tightened upper lip and an irregularity at the vermillion border which can easily be corrected. This was the first patient operated upon by this method.

Case 2.—This patient had a harelip which was even worse in degree than the first one because there was more flaring of the nostrils. The photograph shows the condition sixty-two days after operation. Both nostrils are not as full as they should be and the right one is a little higher than the left. There is also a slight defect in the lip at the mid-line.

Case 3.—This child had a bi-lateral cleft of the lip and alveolar process but the palate was intact. The first photograph shows the child before operation, and the next shows the result after two weeks with the Logan bow still in place. The last photograph shows the result four weeks after operation. Particular attention is called to the symmetry of the nostrils. The slight irregularity in the vermillion border will be corrected at an early date.

#### *Comment*

As stated above, the modification of the incision for double harelip operation may be original, however, it is to some extent similar to the ones proposed by Drs. Lyons, Horsley, Jr., Hagentorn, Turck, and Ladd. Obviously the chief reasons for obtaining a



Fig. 11.—Case 3, Two weeks after operation.



Fig. 12.—Case 3, One month after operation.

large amount of orbicularis oris muscle in the new lip were not only to have this muscle bundle resemble as much as possible its normally large counterpart which gives suppleness to the lip, but also to provide a constant force which is highly instrumental in aligning the pre-maxilla with the maxilla.

It is to be remembered that the pre-maxilla normally has no muscle (Ritchie, Veau and Plessier), and it is therefore highly important to have muscle joined to muscle across the mid-line. Of course it is possible to make the distance A-B long and thus get a very long upper lip, and this danger has been mentioned by Brown and A. D. Davis. Nevertheless, as Thompson and Farr pointed out, the lip must be made long enough. It follows, then, that the length of the distance A-B must be determined to some degree by the experience of the surgeon; the danger lies in making the distance too short, as can be seen from the results as pictured by Ritchie (Lewis: Practice of Surgery).

The importance of the muscle suture can not be over emphasized, and this factor has been amply stressed by Mullen, Ritchie, Rosenthal, Brophy, Blair, Brown, Lane, Hartel, Veau, and particularly by Moorehead. It is needless to leave long ends to the cat gut tie in approximating the muscles, not only because more catgut will be left in a relatively small wound, but also because it is more logical and purposeful to put in an extra tie of the cat gut and cut the ends short, than to have long, loose ends in the wound. The suture layers here described for the double harelip can be advantageously applied to the single harelip operation.

Also it would seem more reasonable to preserve as much of the tissue as possible (Hagentorn, Rosenthal), rather than to remove even small portions of it as is indicated by the Thompson method. In fact some writers, like Hartel and Peyton, believe there has been no absence of structure formation but that all the tissues are at hand, only separated.

Finally the maintenance of absolute rest for the wound, in order to insure healing is extremely important, and except for specific mention of it by Kitlowski, and Rosenthal this feature has not received the consideration which it so richly deserves. Undoubtedly many of the failures due to breaking down of the suture line can be directly attributed to unnecessary crying by the child, and consequent tension on the suture line. After all, sedatives are given only for a relatively short time and there is no danger of complications from this source.

#### *Summary*

A simple, modified operation for double harelip has been described. The important points in the operation are the preservation and utilization of the tissues at hand; the symmetrical approximation of the two lateral flaps, with an abundance of orbicularis oris muscle; the careful suturing of the denuded surfaces with almost three rows of sutures; the approximation of muscular tissue in the mid-line and the ample use of sedatives to insure complete rest for the wound. It is felt that by this method a surgeon with relatively little experience in plastic surgery may achieve satisfactory results in double harelip operations.



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*Discussion on Paper by Dr. F. C. Lee*

DR. E. A. WILCOX (Augusta): This excellent paper of Dr. Lee expresses a modification of standard technique, and I think we can say that the result speaks for itself.

An article by Harry R. Ritchie, "Lewis' Practice of Surgery," cites several facts in the embryology of these parts, wherein three great divisions of various tissue must unite, where it is indicated and proven that in both human beings and in the lower animals that all of the clefts which are seen clinically in the various forms of harelip in the newborn are normally present in every embryo. The opportunity for these clefts is always present. As we see them in the various types of deformity, they are the result of failure of the normal line of coalescence to unite or to contact. The line, of course, extends from the vermilion border of the lip all the way back to the uvula, and failure to unite in one, two or all points of proper contact results in various types of deformity.

It is probable, as Dr. Lee has indicated, that there is no real absence of structure formation, all of the tissues being at hand, only separated. This idea is supported in the instance of a girl eighteen years old, presented by Ritchie in his article, with the original cleft lip present. She showed normal power and function of the muscle, for by voluntary action the cleft could be nearly closed. The explanation, he says, is due to the fact that the orbicularis muscle is composed of integral muscle bundles, having within the body of the whole, their own origin and attachment. This arrangement, together with the associated fascial groups on either side, favored growth and hypertrophy

of the bundles of orbicularis. It is therefore most vital to the success of the operation that as little tissue as possible be removed.

The most important feature of Dr. Lee's modification is the incision to shift the upturned portions of the orbicularis muscle so that they may be united over the premaxilla.

And finally, again I wish to call attention to Dr. Lee's idea of the use of bromide to inhibit excessive muscular action during healing.

DR. F. C. LEE (Closing): I will simply answer a question. When you operate on the patient, operate as early as you can, but you should not operate until the baby is in condition. He should have his original birth weight back, and should be free of any infection like pharyngitis. When there is no indication of infection, you can operate.

## UTERINE HEMORRHAGE\*

L. C. ALLEN, M.D.

*Hoschton*

In the limited time at my command I can only hope to outline some of the causes of uterine hemorrhage, and make brief suggestions regarding the treatment.

Uterine hemorrhage is not a simple matter that can be adequately treated with ergot, viburnum and so-called uterine tonics. It is a symptom that occurs in a large variety of conditions, some trifling, others exceedingly grave; and before effective treatment can be instituted in any case a thorough investigation must be made and the cause discovered. I am aware that this remark will appear to some of you as being entirely superfluous, and it ought to be superfluous, but as a matter of fact many of these cases are treated for months without any serious attempt at diagnosis being made. In many cases the task of making a complete and satisfactory diagnosis is far from easy, and complete anesthesia may be necessary.

The amount of blood lost at the menstrual periods differs rather widely in different women, and we have no exact standard to guide us. Each mature woman, however, has a pretty accurate knowledge as to what is normal in her individual case, and if we say a woman has hemorrhages we postulate a norm for that woman from which she varies.

\*Read before the Medical Association of Georgia, Augusta, May 10, 1934.

The patient's physical condition will throw some light upon the case. If she is anemic, weak, dyspneic, without other discoverable cause, we should investigate the vaginal discharges. It is a most unfortunate circumstance that women often postpone the seeking of medical advice until it is too late to institute successful treatment. If abnormal discharges occur anywhere near the time of the menopause, older women will tell the patient that her irregularities are "nothing but the change of life," that they are natural at her age and should cause no concern. This pernicious advice causes the unfortunate woman to postpone a medical examination while a progressing and deadly malignancy is destroying her life. It is regrettable, but true, that even physicians are sometimes neglectful in these cases. A rule that we should religiously and invariably observe is that *no case of uterine hemorrhage should ever be attributed to the menopause until every other possible cause of the condition has been satisfactorily excluded.*

A pelvic examination of our patients is not always convenient and may be attended with considerable difficulty, and after doing our best we will sometimes be left in doubt. However, it is a duty that our professional work imposes upon us. The physician is like a soldier on guard duty who lets no one pass without proper credentials and identification. Likewise the physician should let no cancer, fibroid or other important condition pass his consultation room without discovery.

In making the examination we must inspect, palpate and explore all organs and tissues, from the vaginal introitus to the ovaries, in an effort to locate the *exact* source of the bleeding. We should not discredit our work by guessing. The blood may be coming from a ruptured hymen, which calls for clamp and ligature; or the blood may be coming, as in a recent case of mine, from a carcinomatous ulcer located just inside the vulva which presents a grave prognosis. According to my experience a cancer located above the vulva is more serious than is cancer of the uterus, because metastasis from the former location occurs quickly. Radium is perhaps the treatment of choice, or possibly in early cases excision followed with radium buried in the

wound. But the prognosis is dubious under any form of treatment.

The possibility of syphilis as a cause of uterine hemorrhage should always be borne in mind. Extensive syphilitic growths simulate cancer very closely, and the diagnosis is determined by the laboratory. But a patient might have syphilis and cancer at the same time. The Wassermann test and the microscope should always be used to determine the diagnosis in doubtful or suspicious cases. Syphilitic cervical growths are resistant to conservative treatment, and are best treated by actual cauterization or electric coagulation.

*Pellagra.* According to my experience pellagra is a prolific cause of both menorrhagia and metrorrhagia about the time of the menopause and before that time. I have repeatedly called attention to this before, and am positive that pellagra is a very common cause of uterine hemorrhage. For these cases radium is a sovereign remedy and, if properly used, 100 per cent effective. I believe that in these cases a sterilizing dose should be given. The patient's general health will be much improved by putting a complete stop to the repeated hemorrhages, a direct source of anemia and its attendant evils, often long protracted, and for which there seems to be no other certain remedy. Besides, these pellagrous women should be spared the ordeal of pregnancy, childbirth and lactation, to say nothing of the probability of abortion and other complications.

*Chlorosis.* This is a functional bleeding met with in girls about the age of puberty or soon after that time. The flow is pale, excessive, prolonged and exhausting. The treatment should consist of a judicious combination of hygienic and medicinal measures—rest, freedom from worries and school duties, fresh air, sun-baths, good food and the administration of iron, arsenic and cod liver oil. If these measures fail, or if the hemorrhage becomes alarming, then a complete examination should be instituted and should be done under complete anesthesia. The examination should be bimanual and recto-abdominal. It is seldom necessary to rupture the hymen. In the language of Howard Kelly, "It is often surprising to note the facility with which the uterus, tubes and ovaries



may be felt and examined per rectum, especially if the patient is first prepared by washing out rectum, then put in knee-chest position and air allowed to inflate the rectum, after which patient is carefully returned to the dorsal position, keeping pelvis higher than the rest of the abdomen." This procedure gets intestines out of reach.

*Adolescent Hemorrhages.* I have recently seen four cases of bleeding in young girls at the time of puberty, which are known as adolescent or menarche hemorrhages. In such cases menstruation comes on for the first time, and without any discoverable cause continues constantly for weeks and months. The loss of blood produces marked anemia, weakness, emaciation and arrested growth and development. If hygienic and medicinal measures do not correct the trouble in a reasonable time and the patient begins to show the evil effects of the loss of blood, we have in radium a remedy which gives brilliant results. In these cases the patient is completely anesthetized, the cervix dilated, but the uterus is not curetted, 50 mg. of radium, properly screened, is inserted into the uterus and left for about four hours. This is a non-sterilizing dose. It does not bring on the menopause. In the four cases of this type in which I have used it in the manner just described the bleeding was stopped, and the patients menstruated normally afterwards. It was remarkable how fast these patients picked up after the bleeding had been checked, gaining color, flesh, spirits and strength in a striking manner.

*Blood Dyscrasias.* Certain blood dyscrasias, such, for instance, as hemophilia, purpura and pernicious anemia, may cause excessive uterine bleeding. In all functional cases the coagulation time should be tested. If the clotting is unduly delayed, or if the clot is weak, it may be advisable to refer the patient to a suitable laboratory to have the blood tested out for coagulating factors. Commercial preparations of thrombin given hypodermically will usually check hemorrhage if the bleeding is due to faulty coagulation. But if a calcium deficiency exists the result will be only temporary, and in such cases we should adopt measures to increase the calcium content of the blood. Pernicious anemia and

other dyscrasias must be treated according to indications in each case.

*Idiopathic Bleeding.* We occasionally meet with cases of bleeding from the mouth, nose, kidneys, bladder, vagina and uterus for which no discoverable cause can be found, and which is therefore called "idiopathic bleeding." At times these hemorrhages come on spontaneously, at other times after some slight injury or manipulation. I saw a case of bleeding from the mouth in a young preacher which was quite alarming, and resisted all treatment for twelve hours. When such a bleeding comes from the uterus it should be treated in the customary manner, with both mechanical and medicinal measures—vaginal packs, ergot by mouth and thrombin hypodermically. In all cases of this type of hemorrhage Kaplan recommends the application of high voltage x-rays to the anterior spleen as an indirect method of controlling the hemorrhage. He states that this method is especially valuable in bleeding from the uterus in virgins and young girls. Just how the reaction to the x-rays causes a cessation of the bleeding is not understood, but Kaplan suggests that it may be due to the stimulating effect of the rays upon the coagulating substances of the spleen. Kaplan also suggests that radium be applied directly to the bleeding surface, the idea being that, due to its action on vascular tissue, local application of radium to bleeding surfaces sometimes brings about fibrous thrombosis of the bleeding vessels, with cessation of the bleeding.

*Endocrine Dysfunction.* Undoubtedly endocrine disturbances of one kind or another—dysfunction or malfunction, or disharmonious action—play the chief role in some cases of troublesome uterine hemorrhages and menstrual irregularities. Want of time forbids a discussion of this feature. I hope some one here who can qualify as an expert on ductless glands will discuss this subject. It is a condition that must be borne in mind in diagnosing these cases, for it is a rather common phenomenon.

*Focal Infection.* Strange as it may seem, focal infections are at times responsible for menstrual hemorrhages. In young women the tonsils should be carefully inspected,

while in older women the teeth are more likely to be found to be the source of infection. Cases have been reported by no less an authority than Howard Kelly where removal of diseased tonsils cured the patient after other measures had failed. The appendix and gall-bladder should not be forgotten, as well as such infections as salpingitis and bartholinitis.

*Hyperplastic Endometrium.* This condition was formerly termed endometritis, but there is no infection and no inflammation, only an hyperplastic overgrowth. Cancer can be excluded only by the microscope. Hyperplastic endometrium has often been found associated with cancer of the ovaries, so that when this condition of the endometrium is found the question of ovarian malignancy arises and demands careful consideration. In the absence of malignancy curettage gives excellent temporary results, but the relief is not permanent. Formerly these cases were subjected to an hysterectomy as the only means of a permanent cure. If cancer of both the endometrium and ovaries can be excluded, a hysterectomy with its attendant mortality, weeks of hospitalization, postoperative adhesions, etc., is no longer necessary or justified. In all such cases radium is a certain cure, a sterilizing dose completely and permanently curing the patient. In using radium in multipara a general anesthetic is not necessary. A slight dilatation under sodium amytal, two capsules given two hours before operation, supplemented with one-fourth grain of morphine, if thought necessary, is sufficient for painless and easy introduction of the radium into the uterus. In many cases no dilatation is needed. The treatment is painless, and when properly used, is without harm or danger. Only one or two days in the hospital is necessary; no mortality or unpleasant sequela.

*Polyps, Cervical and Intra-Uterine.* One patient of mine had wasted \$150 on patent medicines before she would allow an examination. She had a pedunculated cervical polyp as large as a small orange, which was twisted off and the base fulgurated with diathermy. No anesthetic was used, only sodium amytal and morphine being administered two hours before operation. A permanent

cure resulted. The removal of small cervical polyps is a minor operation which can easily be performed in the office. Large polyps require more careful handling on account of the danger from hemorrhage. In such cases the operation should be done in a hospital where facilities are available for any emergency that may arise. Large, ulcerating, bleeding and sloughing growths, both polypoid and submucous fibroids, may be the cause of a terminal blood infection. Such cases require great consideration and a high degree of skill in their treatment.

*Fibroid Tumors of the Uterus and Fibromyoma.* Lack of time prevents any extensive discussion of these important neoplasms. Two per cent of these growths are malignant, and in the bleeding tumors the per cent of malignancy is much greater. With nulliparous women, especially if unmarried, it will often be advisable to make the examination under complete anesthesia, and as a rule, bimanually per rectum and abdominal wall.

Ninety per cent of these growths may be successfully treated by radiation. Formerly we treated only small tumors by irradiation. Lately we have been treating very large tumors, both multiple and single, with surprising success by a combination of deep x-rays applied through the abdominal wall and over the sacrum, and through each sacrosciatic notch, and radium applied in the uterine cavity. By this means these tumors disappear, and the symptoms, including hemorrhage, are completely and permanently cured. If radiation fails surgical removal becomes necessary. Submucous fibroids, however, are better treated by surgical means. However, where the patient, from loss of blood or other cause, is a poor surgical risk, heavy radiation over a considerable period of time may be tried with the hope of either curing the condition or of controlling the hemorrhage until such time as the patient may be qualified for a major surgical operation.

In regard to fibroids, it must be conceded that probably a majority of the gynecologists still contend that surgery is the best method of treatment. It is generally conceded that irradiation, however, is the treatment of choice under certain conditions which are ex-



remely common: (1) in small tumors, not larger than a five months' pregnancy, and which are not producing pressure symptoms, and are not undergoing degeneration; (2) all cases of fibromyoma in women with marked organic heart disease, diabetes, nephritis, tuberculosis, or other conditions which would render a major surgical operation too risky; and (3) in all cases of fibroids in which operation is contra-indicated by the presence of anemia. A majority of the cases that I see are very anemic, due usually to the loss of blood over a considerable time.

*Hemorrhages Attending the Pregnant State.* Not long ago a patient who had been wasting for four months was referred to me with a tentative diagnosis of an intra-uterine neoplasm, probably malignant. What was found was a piece of placenta as large as two fingers trying to escape through the os uteri. A cleaning out under ether cured her. In all postabortive cases curettage is the one remedy. It may be followed by oxytoxic drugs. The possibility of threatened abortion where pregnancy is not suspected, or is denied, must not be overlooked. Very puzzling cases are met with where there appears to be a threatened abortion, or has recently been an abortion, in a woman who also has a neoplasm of the uterus. Accidental hemorrhage during pregnancy is an ominous symptom and a cause for anxiety and careful watching. However, a vast majority of these cases terminate happily. Placenta previa need not be discussed here, but in all cases of uterine bleeding it is highly important to exclude extra-uterine pregnancy, as this condition, because of its rarity, is easily overlooked and often difficult to diagnose.

*Senile Vaginitis.* This condition occurs in elderly women far past the menopause. It is not a rare condition, and deserves more attention than it has received in the past. Usually there is only a frequent spotting, but occasionally the bleeding is quite free, coming usually from an erosion on some part of the vaginal wall. The condition is easily mistaken for cancer, and the microscope may be required to clear up the diagnosis. There is a tendency for the vaginal walls to become adherent, or the anterior wall may become attached to the cervix and a blind pocket formed, which pocket may contain pus and

blood. The condition is usually accompanied with a narrowing and shrinking of the vaginal introitus, even vaginismus, which renders the examination painful and difficult. Treatment is very successful, and consists of cleansing the parts and the application of a 3 per cent solution of silver nitrate, repeated every two or three days until healing has taken place.

*Cancer.* The limit of this paper permits only a brief reference to this, the most important of all causes of uterine hemorrhages. Carcinoma of the cervix, or body of the uterus, is a very common cause of uterine hemorrhage, irregular in character, and seen oftenest in middle life, but by no means confined to that period. Errors in diagnosis here are so serious and fatal in their consequences that, in the language of Kelly, "The discovery or exclusion of malignancies becomes the most important objective in all examinations of tumors of the uterus, as well as in all protracted hemorrhages." A dictum of Crile is appropriate here; namely, "Every case of uterine hemorrhage is cancer until proven otherwise."

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*Discussion on Paper by Dr. L. C. Allen*

DR. J. W. LANDHAM (Atlanta): I have enjoyed the paper of Dr. Allen, and think he has covered the ground very nicely. I am glad to see him emphasizing the same point that he emphasized in discussing the paper of this nature that I read before the Medical Association of Georgia three years ago. That point is that the patient should be thoroughly examined.

Our trouble has been that we have not been examining our patients. We have not examined them enough to find out what is the matter with them. We institute treatment of some kind, medication or radiation therapy, or refer them for radiation therapy, without proper examination.

These cases may be divided into two groups; that is one way of classifying them. One group is from the period of womanhood up to the age of thirty-eight, or the menopause period. The other group includes a large group of cases of uterine hemorrhage, a larger group, after the age of thirty-eight, the menopause period.

During the active child bearing period, from womanhood up to the age of thirty-eight, we have to consider some of the things that Dr. Allen has emphasized in his paper, more than we do probably later in life, namely, syphilis, pellagra, blood dyscrasias, sclerosis, and endocrine disturbances.

We may classify them in another way, and that is those that show definite pelvic diseases on examination, and those who have constitutional diseases, and those who show no demonstrable disease.

The endocrine group, either in the first age period, from early womanhood or during the active child-bearing period, comes in this group the same as the menopause cases. We know that anterior pituitary hormone may be active, and we may have a perfectly normal ovary, with an excessive blood flow. The thyroids are concerned in that, in that they have control of the calcium metabolism. Some of these cases are in the adolescent period of control by giving parathyroid hormone. I think it should be given in connection with calcium lactate or chlorid, so that it won't be localized, where it has been applied to good advantage.

We have pelvic disease. Of course the pelvis should be examined, to rule out polyps, fibroid tumors, ulceration of the cervix, and pelvic inflammatory diseases.

I think that in the adolescent period, the bleeding can be controlled if demonstrable diseases can be found, and generally it is concluded after an examination that it is due to a puncture of the ovary. Dilating the cervix in a multiparous woman or even in an unmarried girl is not quite so easily done as treating by x-ray, and they can be treated, not hospitalized, not losing social engagements or work, or anything of that kind.

DR. GEORGE L. ECHOLS (Milledgeville): I wish to thank Dr. Allen very much for the paper that he has given us this morning, and I rise for one point only. That is his statement concerning pellagra as a possible etiology of uterine hemorrhage. This interested me very much, Doctor.

As you know, Dr. Goldberger was with us at Milledgeville for eighteen years, spent thousands of thousands of dollars in research on pellagra, and we studied cases in large numbers. In fact, I suppose the best work that has ever been done on pellagra has been done at our place.

This is what interests me: I was associated closely in this research and I do not recall this coming up for discussion. When I go home I am going to look it up and see if it is in any of Dr. Goldberger's records, and I will write to Dr. Wheeler and get the data on this and see if uterine hemorrhage associated with pellagra has shown itself in that piece of work.

I want to call your attention to one thing that might be misleading. Pellagra is a disease which is dietetic, and any lowered vitality invites a development of the disease, apparently, and we might get mixed up along this line. You know if anything gets in scientific literature that is erroneous, it takes about fifty years to get it out. That is the reason I rise to this particular thing.

NOTE—Dr. G. A. Wheeler (Retired), U. S. Public Health Service and Assistant in Dr. Goldberger's Research Work, has written Dr. Echols as follows:

"There is no clinical basis for the view that pellagra predisposes to uterine hemorrhage. Your stand in the matter, is, in my opinion, quite sound."

DR. J. L. CAMPBELL (Atlanta): I am glad that

Dr. Allen presented this paper to the Association. I want to emphasize the statement that "every case of uterine hemorrhage, especially in women past 40 years of age, should be considered the result of cancer until proven otherwise."

For years I have been trying to convince the public and the profession that this is true. Every doctor knows it! He just does not realize it and neglects to make a careful examination. Any ulcer on the cervix of a woman who has borne children is a potential cancer. It should not be there even if it is not a cancer! Many diagnostic tests have been advocated, but the only sure one is to clip out a small mass from the most suspicious area, cauterize the wound thoroughly, then submit the specimen to a competent pathologist for a report. If it is a cancer don't delay treatment.

In cases of hemorrhage where the cervix is normal in appearances a curettement should be done and the scrapings examined, for the lesion may be located in the cervical canal or in the body cavity. A woman who has never borne children is quite as likely to have cancer of the body of the uterus as one who has. We know that hemorrhages may be due to polyps, to submucous fibroids, to an old incomplete abortion, to proliferating endometritis, etc., but when the patient is in the menopause period it is our duty to find out.

In younger women the endocrine feature should be studied before any radical procedure is undertaken; but in older women—women approaching, in or past the menopause who deserve our most serious consideration.

DR. L. C. ALLEN (Closing): The chief object in presenting this paper to the Association is to stimulate interest in this subject and to promote, if possible, better work than we have been doing in this particular field. If you will examine your works on gynecology that were published more than fifteen or twenty years ago, you will be surprised at the small amount of matter in these books on the subject of uterine hemorrhage. Some great, large books will have less than an eighth of a page on uterine hemorrhage.

I am a country doctor, a general practitioner. These high-powered specialists in gynecology here do not need any advice from me, but the general practitioner in the country should give these cases careful consideration. First, a complete history of the case should be taken; then a complete physical examination made. Any doctor, after a few years of painstaking study and experience should acquire sufficient skill to diagnose the vast majority of these cases; but first of all, as Dr. Campbell has well stated, and than whom I know of no one better qualified to give sound advice, the first question to ask ourselves whenever one of these cases of uterine hemorrhage seems to us is "Has this woman cancer?" Do not give her a prescription and send her to the drug store. Put her on the table and examine her and find out what the condition is, and remember Rule No. 2: "Every case of uterine hemorrhage is cancer until proven otherwise."



## SYMPOSIUM ON FRACTURES

DRS. MICHEL AND WRIGHT

## TREATMENT OF FRACTURES\*

HENRY M. MICHEL, M.D.†

*Augusta*

It would seem to be highly probable that primitive man's first essay on major surgery may well have been that of the treatment of fractures.

Although the Great War doubtless gave an added impetus to our interest in fractures and increased our knowledge of their treatment, it is well for us to remember that wisdom did not begin with this generation. For centuries, there has been no radical change in our general conception of the treatment of fractures: but there has been a slowly progressive improvement in our methods, and a more widely disseminated knowledge of these methods, so that today more men are competent to treat fractures than ever before.

Our aim in the treatment of fractures should be to restore the patient to his usual activities as soon after his accident as possible, and as nearly as may be to his normal anatomical and physiological state. With this end in view we must first obtain reduction and then fixation. In the great majority of fractures this end can be accomplished by traction and countertraction.

Of late years the extended use of the x-ray has apparently lessened our knowledge of the basic principles of fracture pathology. By this we mean that surgeons of today are too prone to make their diagnosis entirely by means of radiography. Without in the least decrying the inestimable value of the x-ray we do believe that too much reliance on its findings has increased the number of open operations on fractures that would have given good results if treated by the closed method.

There has been a strong effort made in this country towards the standardization of the treatment of fractures; but this domain of surgery is individual and probably will always remain so. There is nothing that re-

quires more careful personal attention to detail than fractures. Just as it may be said that a baby starts on its way to the grave with its first gasp, it is also true that a fracture starts on its way to union at the time of the accident. So the slogan started by the English in the late war, "splint them where they lie" is a sound principle. It must be recognized that certain fractures are operative cases, and they should be treated as such immediately and not by waiting until a bad result forces this conclusion on us. It is almost axiomatic to say that the treatment of a fracture has for its object the restoration of function. This object can be attained only if the surgeon has a sound knowledge of the attachments of the muscles, an estimation of their relative strength, and the direction in which they pull. Furnished with this knowledge he can handle the vast majority of closed fractures without operative intervention.

In those cases where the surgeon seeks to obtain immediate reduction by means of manipulation and locking of the fragments a general anesthetic should be used. At present local infiltrative anesthesia seems to be increasingly popular in fracture work, but it is well for us not to lose sight of the increased danger of thrombosis and embolism that may result from the injection of traumatized tissue. No anesthesia is needed when we use the gradual traction method. When pain is complained of by the patient it is a proof that something is wrong with our traction or suspension.

No general discussion of fractures would be complete without considering in some detail the ever present danger of either delayed or non-union.

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UNDULANT FEVER DUE TO BRUCELLA OF  
OF THE PORCINE TYPE—BRUCELLA SUI:  
REPORT OF A MILK-BORNE EPIDEMIC

C. P. Beattie, Selma, Currie, Midlothian, Scotland, and Raymond M. Rice, Council Bluffs, Iowa (Journal A. M. A., May 19, 1934), present their observations of a milk-borne epidemic of undulant fever of thirty cases. Of these patients, twenty-seven obtained their milk from the same dairy. The dairy, from a herd of twenty cows, supplied approximately eighty households; in eighteen of these, cases of undulant fever developed. *Brucella suis* was obtained in blood culture from six of fourteen patients and from the milk of one of the cows in the herd. The epidemic ceased thirteen days after the stoppage of the sale of milk from the dairy.

\*Read before the Medical Association of Georgia, Augusta, May, 9, 1934.

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## NON-UNION OF FRACTURES\*†

PETER B. WRIGHT, M.D.

Augusta

If all cases of fractures were adequately treated there would be very few cases of non-union.

Delayed union, a condition in which the natural reparative forces are halted, must be distinguished from the fixed condition of non-union. Even though, in rare instances, delayed union of the repair of a fractured bone may extend over a period of many months or even years, some progress may be detected by careful x-ray examinations. No such progress is seen in the condition of non-union which is a terminal condition in which all efforts at repair have failed. Lack of progress can be determined within a few months after fracture by x-ray examinations and study. By distinguishing between these two conditions we can readily and definitely decide whether further conservative treatment is necessary or an open operation is inevitable if firm bony union is to be effected.

There are many conditions that favor non-union of fractures. Of these the following seem to be of chief importance.

(1) *Severity of the Injury*, including massive and irreparable destruction of the soft tissues, muscles, nerves and blood vessels as well as loss of substance of the bone itself which necessarily results in replacement of normal tissue by dense fibrous tissue that is poor in blood supply.

(2) *Failure of Contact of the Fractured Ends* which may be due to loss of bone, especially when the fractured bone has a companion as the radius or ulna which precludes the possibility of contact of the fragments of the injured bone by the inflexibility of the uninjured one.

(3). *Inadequate Reduction*. Overriding of the fragments or the excessive separation due to too great traction or the separation that too often results from the rigid fixation by steel plates which prevents contact if the

fractured ends are somewhat absorbed. Also the lack of approximation due to angulation. If the reduction of a fracture is not good the gap will be larger and the process of repair delayed in direct proportion. The gap being too great, non-union results. Normally, the space between the fragments of the fractured bone must be bridged across by young connective tissue rich in capillary blood vessels and then the initial hyperemia subsiding, calcium is deposited to form a callus. As the process continues the fibrosis is increased with a resulting impairment of the local blood supply and a denser fibrosis takes place which, in turn, results in still further impairment of the local blood supply producing sclerosis and finally firm bony union.

(4) *The Interposition of Soft Tissues, Usually Muscles*. Failure after two or three attempts at reduction usually indicates interposition of soft tissue and open operation is indicated without further delay.

(5) *Infections*, usually complicating compound fractures although osteomyelitis does occasionally complicate simple fractures and enough destruction takes place to prohibit bone repair. In the treatment of compound fractures so frequently immobilization is unnecessarily sacrificed to the treatment of infection.

(6) *Inadequate Immobilization*. If immobilization is not adequate the fine capillary vessels that form in the young connective tissue are torn and the further development of connective tissue is inhibited. Repeated tearing of this connective tissue and rupture of the capillary blood vessels gives rise to a continued hyperemia which results in decalcification of the bone ends and if fixation is not made suitable when the hyperemia does subside there will be no continuous mass of callus to be recalcified. The bone ends become concave and the plaque of bone across them becomes sclerosed and non-union is a final result. Inadequate immobilization is undoubtedly one of the chief causes of non-union, for example, non-union is most frequently seen in fractures that are hardest to immobilize, and it is an established fact, especially in the cases of fracture of the neck of the femur, that bony union is in direct ratio with the firmness of the fixation.

\*Read before the Medical Association of Georgia, Augusta, May 10, 1934.

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Wolff's law, "all changes in the function of the bone are attended by definite alterations in their internal structure." According to this law, in disuse, atrophy or decalcification would be expected. But disuse without the accompanying hyperemia of trauma or infection does not change the density of bone through a period of three weeks or less. Conway and Stubenbord immobilized twelve normal extremities, usually the wrist, for periods ranging up to three weeks and found no evidence of atrophy (Osteoporosis).

Early complete immobilization of the fragments offer most in the treatment but must not be continued for too long a period. After callus has formed as demonstrated by the x-ray, gentle active and passive motion, massage and diathermy are indicated for the restoration of the normal blood supply and to combat the inevitable atrophy of disuse and the stiffness of the joints. The decalcification of disuse is often the cause of delayed union and may occasionally be the cause of non-union, therefore, early functional activity in the treatment of fracture cases is imperative. Splints that allow most activity of a limb associated with complete immobilization of the fragments are the ideal.

*A Seventh Cause of Non-Union is That Through Reduction is good* and fixation is adequate, the natural forces of repair are inactive. Decalcification results from the hyperemia accompanying infection, yet often is ischemia blamed for the non-union of a fracture. Accordingly two opposite factors are charged with being the cause of the same termination. Hyperemia of bone results in decalcification and ischemia results in sclerosis. Certain conditions as diseases of the central nervous system, pregnancy, hemorrhage from any cause, nephritis, nutritional disturbances, acute febrile diseases, endocrine disorders, etc., may have direct bearing on the repair of fractures. According to some authorities syphilis appears to be a cause of non-union. All such conditions that interfere with the general health of the patient and secondarily prevent union of fractured bones should be sought for and remedied.

The calcium and phosphorus serum content should be investigated, as deficiencies in

these two inorganic substances, especially phosphorus, seem to have a direct influence on the healing of injured bones. Low calcium results in little callus, while in the condition of low phosphorus the callus is formed but calcification does not take place. Petersen made a determination of calcium and phosphorous expressed in milligrams per one hundred c.c. of blood serum. These determinations were multiplied together and the product expressed as the "inorganic calcium and phosphorous content." A calcium content of 10 and phosphorous of 4 would yield a product of 40 which favors healing. With an index figure of thirty-five to forty, healing took place actively, thirty to thirty-five slowly, and below thirty no healing. When these deficiencies are corrected repair begins and bony union results.

Osteoblasts have always been given the credit for bone repair but until lately the osteoblast itself had not been analyzed. It is a cell of mesenchymatous tissue, especially differentiated as one that readily receives and also readily gives up calcium and inorganic salts. This property is believed to be stimulated by enzymes and under the control of the endocrine system. Other cells of mesenchymatous tissue if metamorphosed to the primitive type may be rebuilt to a cell capable of the same action, thus explaining the deposit of bone in muscle, scars and viscera. According to Greig "the only factor necessary to determine bone as the ultimate destiny of a mass of primitive mesenchyme, is an excess of calcium with an adequate blood supply." Fibroblasts having an adequate blood supply in the presence of an excess of calcium will produce bone. Bone will be formed when there is a balance of the calcium content with the blood supply of mesenchymatous tissue, if the active enzyme phosphatase is present. The enzyme phosphatase causes the precipitation of calcium phosphate from the readily soluble calcium hexose monophosphoric esters. It is secreted by injured bone and taken up by the hematoma, stimulates the deposition of calcium salts from the newly established capillary circulation and influences the process of ossification. The hematoma about a fracture is a suitable medium for the deposit of calcium salts and

the formation of bony callus. Fibrin is not as suitable a medium as blood.

Osteogenic cells in small numbers are distributed throughout the cortex of the bone as well as the cambium layer of periosteum and the endosteum, they receive sufficient nutrition to survive. These cells lie dormant until stimulated by trauma. While periosteum in young animals is capable of regenerating the shaft of a bone, such regeneration is not to be had in adults. Therefore, the rapidity of the repair of fractures depends upon the age of the patient and the activity of the component parts of a bone. Presumably, more osteogenic cells are present in the young than in the adult. These cells may be stimulated by trauma and in very old patients, who need open reduction, much can be gained by making several transverse cuts through the periosteum and into the cortex of a bone a week before the actual operation is performed.

Once non-union is established the choice method of treatment must be selected. The primary aim should be to remove the eburnated ends and gain good apposition. Remembering always that the lower fragment receives less blood supply than the upper, as little interference with the blood supply as possible must be one's endeavor. Fixation with the use of plates, bands and wire definitely have their place in bone surgery but it must be remembered that they only serve as agents of fixation and are best removed after they have served their purposes. While many have been left in situ for years, it cannot be disputed that once they have immobilized the fragments a sufficient length of time for union to take place they have completed their very good purpose and are, from then on, foreign material and a possible source of trouble. Since all potential detriment should be avoided it is advisable to remove these appliances. The use of autogenous grafts serve three very precise functions:

(1) That of fixation, the tighter the graft is applied to the shaft of a bone, whether it be an onlay or inlay graft, the greater is the fixation.

(2) The graft augments the local excess of calcium.

(3) The removal of the sclerosed bone ends preparatory to the construction of the graft bed liberates the calcium salts and allows revascularization.

After these functions are performed the graft is ultimately absorbed and no foreign substance is left as a potential source of trouble. The graft gets no circulation from the bone but becomes encapsulated in fibrous tissue which utilizes its calcium. X-rays taken early will show the graft to be denser than the fractured bone as the latter undergoes decalcification as a result of the hyperemia of injury.

Fragmentation of grafts should not be performed as it lessens the supportive power of the graft and destroys the blood supply of the periosteum, cambium layer and cortex with a resulting diminution of osteogenic power. However, additional bone chips aid by giving more calcium and a larger area of surface from which it may be taken.

If, after the bone ends have been freshened, the ends can be comminuted and impacted to a degree that external immobilization splints may be used to advantage, no internal fixation need be employed. This method offers the simplest and yet one of the most satisfactory as well as the most rational method of treatment.

Conclusions as follows may be drawn:

(1) Positive diagnosis of non-union must be made.

(2) Reduction must be adequate and bone ends must remain in contact.

(3) Interposition of soft tissue warrants surgical interference.

(4) Adequate immobilization is imperative, even in the face of infection.

(5) Causes of non-union may be constitutional or local, which must be determined and remedied.

(6) Hyperemia results in decalcification, ischemia in sclerosis.

(7) Best results from operative treatment are expected of young bones and good results are in direct ratio to age of patient.

(8) Autogenous bone grafts offer the best solution in the operative treatment of non-union.



*Discussion on Papers by Dr. Michel and Dr. Wright*

DR. LAWSON THORNTON (Atlanta): During the past few years much progress has been made in the care of fractured bones. Many ingenious devices and methods have been evolved. Standardization of methods cannot be accomplished because it is necessary to care for fractures under so many different conditions and environments.

Instead of universal standardization, it would seem that each physician who is caring for fractures should work out the plan best suited to his individual ingenuity and facilities. After having established his own standardization, he may select from the new and better methods of others to add to or modify his own.

The use of rustless steel wires and rustless steel Steinmann pins for skeletal traction has revolutionized and simplified the treatment of many types of fractures. Every hospital should keep as part of its equipment, a supply of Steinmann pins and a Kirschner wire outfit. Equipment such as the Hawley Table, and portable shockproof x-ray machine should be provided for every hospital for the sake of accuracy and convenience.

Soon after a bone is broken, the space between the fragments becomes filled with a blood clot and an orderly chemical and biological process of repair ensues. When the secret of this process is well understood, we will know better how to determine the causes of non-union. It is my impression that it is not the general systemic conditions that cause non-union, but local interferences at the site of fracture.

Syphilis is generally regarded as a cause of delayed or non-union. X-ray pictures of syphilitic bone often show the characteristic sub-periosteal thickening resembling callus. Some of us doubt if syphilis can ever prevent union.

Imobilization seems to be the one most important factor. It has been shown recently that the alkalinity of the forming callus increases constantly during the first fifteen days as the result of increasing calcium concentration. The experiments show that the alkalinity was retarded or prevented by motion and by the presence of all metals except rustless steel.

DR. THEODORE TOEPEL (Atlanta): It gives me a great deal of pleasure to be here and to be able to discuss the paper of my old true and loyal friend, Henry Michel. He and Dr. Wright have prepared excellent papers, which were very well presented.

In Dr. Michel's opening remarks, he makes the statement that no radical changes have occurred in centuries, but that there has been a slowly progressive improvement in our methods. I wish to take issue with him on that point that no radical changes have occurred in centuries, because I know from my own experience, which nearly approaches a half century, that a number of radical changes have occurred.

When I first practiced medicine, the prevailing method was to reduce all our fractures by traction, manual traction, only trying to get apposition, with the application of heavy plaster casts. I think the older practitioners will remember that. The result usually ter-

minated in large callus formations, with some disfigurement due to the callus, and some interference of function.

The second change which I passed through was the period of reduction by the open operative method. This method had very enthusiastic followers, especially among the younger surgeons.

The third change we are passing through now is the conservative method of reduction by extension, supporting splints and passive and active exercise, this is primarily based on the principles of physics. At present the greatest exponent of this method is Dr. Lorenz Boehler, of Vienna, Austria, where every year thousands of doctors from this country and other countries go to study his method. We had the pleasure of having him here in this country at one of our important meetings. He stands on solid ground by bringing about as nearly normal function as is compatible with the injury. This also applies to appearance. I had the pleasure of seeing Dr. Boehler in his clinic in 1929. His success depends on minute and personal supervision.

We will quite naturally find extremists in this conservative method. I have a book of recent date at my home written by a French orthopedic surgeon, possibly Dr. Michel has a copy by the same author. In describing his method of treatment the use of massage and passive exercise are emphasized and supporting splints are used sparingly. He begins massaging at an early stage, which is usually about the third day or as soon as the inflammation has subsided.

Of course the use of the x-ray has helped us very much. It is advisable to take pictures before and after reduction.

My advice is to use the method which is best suited to your patient, in order to restore function in the quickest way possible, avoiding all possible disfigurement.

May I make one complimentary remark to Dr. Wright, whose paper, as to his physiological and chemical presentation of the restoration of bone substance is excellent. To the seven causes mentioned by Dr. Wright, as to non-union of fractures I wish to add the eighth one, namely, low vitality. I have found in my experience that by applying concussion to these devitalized long bones is very beneficial.

DR. H. M. MICHEL (Closing): Gentlemen, I want to say a word or two in closing. One thing that Dr. Thornton brought out was the question of syphilis and its positive relationship with non-union of fractures. In our papers we merely mentioned that some people had thought that syphilis was a possible causative factor in non-union, but neither Dr. Wright nor myself believe very much in that theory. One thing is that we southerners, who treat Negroes all the time, who are alleged to be sixty per cent syphilitic, have perfectly good union, so therefore I think even though the idea is generally shared that syphilis is a non-union factor, we both agree that that is not true.

**THE JOURNAL**

OF THE

MEDICAL ASSOCIATION OF GEORGIA

Devoted to Welfare of Medical Association of Georgia

139 Forrest Avenue, N.E., Atlanta, Ga.

OCTOBER, 1934

AMERICAN UROLOGICAL ASSOCIATION  
ESTABLISHES SOUTH-  
EASTERN BRANCH

The announcement of the establishment of a local branch of a national medical organization, which has become favorably recognized because of the valuable service which it has rendered the medical profession and the public, should be of interest to members of the medical profession and to the laity in that locality. Such interest should be aroused by the announcement which has just been made that the American Urological Association, with over 1,000 members, has granted permission for the establishment of a "Southeastern Branch" in the territory composed of the following states: Alabama, Georgia, Florida, Louisiana, North Carolina, South Carolina, and Tennessee. In this area there are already over seventy-five urologists who are members of the national organization, and a much larger number who, although they do not belong to the A. U. A., take an active interest in city or state urological societies.

An increased attention by the medical profession of the Southeast, to urological problems should result from the clinical meetings of this branch of the American Urological Association. And since special provision has been made in the Constitution and By-Laws of the Branch Society to include as members of the organization almost all physicians residing in the southeastern territory who have a special interest in urology and desire to become members, the meetings of the Society should bring together the urologists of the Southeast and strengthen, by concentration, the efforts already being made by the local state and city organizations to improve urological standards.

MONTAGUE L. BOYD, M.D.

THE FIRST MEETING OF THE S. E.  
BRANCH OF THE A. U. A.

The American Urological Association is now the largest urological association in the world, having about 1,000 active members.

Since the organization of the Association in 1902, there has been only two meetings of the Association held in the Southeast—New Orleans 1903, and Memphis 1931.

Recently, the American Urological Association has granted permission for the formation of a Southeastern Branch Society of the A. U. A., its members to reside in Alabama, Georgia, Florida, Louisiana, North Carolina, South Carolina, and Tennessee. There are seventy-seven urologists living in this area who are members of the American Urological Association.

The importance of the Branch Societies in the affairs of the National Association has been greatly increased by the recent adoption of an amendment to the Constitution and By-Laws, which makes it necessary for an applicant for membership in the A. U. A. to become first a member of his local Branch Society; only in very exceptional instances will this requirement be set aside.

*The JOURNAL would like to record the scientific work of Georgia doctors. It earnestly requests, therefore, that each physician in the State who publishes a contribution in some other medical periodical submit an abstract of the article for these columns.*

The Southeastern Branch Society has been granted permission to have as active members not only those who are members of the A. U. A., but also urologists of exceptional qualification, who may not wish to join the A. U. A. Provision has also been made for an associate membership in the Branch Society to be composed of those who do not for some reason qualify for active membership but yet desire to attend the Society's meetings and participate in the discussions of urological problems.

The first meeting of the Southeastern Branch Society will be held in Atlanta, Ga., December the seventh and eighth, and the officers of the Society have decided to present



a program composed of addresses by the most prominent and best known urologists in the United States, so that every physician in the southeastern territory, who is interested in urological matters, will be anxious to be present. The value of the activities of the organization will in time be measured not only by the quality of the service which it renders the American Urological Association and the members of the Branch Society, but also by the service which it renders the general medical profession and the public of the Southeastern States by constantly improving the standard of urological practices and by transmitting to the whole medical profession and the public such knowledge of urological procedures as may be useful to them. Therefore, every physician in the southeastern territory who is interested in urology will be invited to attend the meeting and the addresses delivered will be planned for presentation to the general medical man as well as to the specialist in urology. All physicians who are practicing urology, will be specially invited to be present so that they may become sufficiently informed concerning the plans and activities of the organization to decide whether or not they desire to make application for membership.

Among those invited to present papers are Dr. Edwin Beer of New York; Dr. J. D. Barney of Boston; Dr. William Braasch and Dr. Hugh Cabot of the Mayo Clinic; Dr. A. I. Folsom of Dallas; Dr. Herman Kretschmer of Chicago; Dr. Alexander Randall of Philadelphia; Dr. George Gilbert Smith of Boston, and Dr. Hugh H. Young of Baltimore.

Further information concerning the Society and the December meeting can be obtained from any member of the Executive Committee, composed of Dr. W. L. Bazemore, Macon, Ga.; Dr. E. S. Gilmer, Tampa, Fla.; Dr. H. W. McKay, Charlotte, N. C.; Dr. J. C. Pennington, Nashville, Tenn.; Dr. J. J. Ravenel, Charleston, S. C., and Dr. W. A. Reed, New Orleans, La., or the officers, Dr. Montague L. Boyd, Atlanta, President; Dr. Edgar G. Ballenger, Atlanta, President-Elect; and Dr. Earl Floyd, Atlanta, Secretary-Treasurer. Application blanks for member-

ship and other information will be sent on request to the Secretary, Dr. Earl Floyd, 378 Peachtree Street, N.E., Atlanta, Ga.

MONTAGUE L. BOYD, M.D.

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## ARACHNIDISM MAGNESIUM SULPHATE TREATMENT

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### *Report of Case*

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J. A. REDFEARN, M.D.

*Albany*

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Arachnidism is produced by the bite of the *Latrodectus Mactans* (Black Widow spider). Due to the oval shape of the abdomen it is sometimes called the shoe button spider. The female is larger than the male which she eats when she desires to become a widow. Only the female bites. They are so vicious that they will not stay in groups. When several were put in the same milk bottle they were soon fighting, the winners eating the losers until there was only one left. We placed new spiders into the bottle every day or two, always with the same result. Each new champion would spin a crude web across the bottle, spin her cocoon and deposit eggs in it. Water and flies were given her to eat each day and she seemed content with this home as long as left alone.

Some of the spiders were placed in a local drug store where several thousand people visited them and became familiar with their markings. They have long legs and round, black, shiny bodies with oval red marks on the abdomen and sometimes red dots on the back. The spiders may be found almost anywhere under rocks, bricks, among flowers, in outhouses and sometimes in dwellings and beds where little effort is made to keep the quarters clean. Touching the web seems to be the cause of her attack, otherwise she does not appear vicious. A single bite establishes immunity.

### *Report of Case*

A boy, aged 18, was seen reclining in bed complaining of agonizing pains in the abdomen and legs. He was pale; had rapid, labored respiration; slow, weak pulse; profuse perspiration; general weakness and numbness particularly in his legs. His blood pressure

was 150/100. His temperature was 97. His abdomen had a board-like rigidity, but his chief concern was his legs, because they would not support his weight sufficiently to walk. His mental condition was not clear so it was impossible to get a good history. However, his mother stated that he ate "hot-dogs" for supper the night before and had vomited several times after 1:00 A.M. The vomitus was clear fluid at first, later showing bile stain. Several enemas were given with fair results, but without effect on rigidity, which was constant but not paroxysmal. Six grains of sodium amytal were given within an hour with slight benefit.

A young man who was with the patient of the evening stated that they had visited a privy and his friend complained that something bit the head of his penis. This complaint was repeated several times during the next thirty minutes so he advised his friend to go home. He went to bed for half an hour, but the severe pain forced him to go to an adjoining room for assistance. He tried to walk, but his legs gave way, forcing him to crawl.

The friend's story suggested the bite of the Black Widow spider so the toilet was visited and the spider found just under the edge of the seat used by the patient a few hours previously. There was a small, slightly reddened area on head of penis. Hot fomentations, serum of convalescent patients, sedatives and hypnotics have been used, particularly morphine for pain. Recently an article by Cesareo DeAsis in the American Journal of Tropical Medicine suggested the intravenous use of magnesium sulphate with most gratifying results. Ten cubic centimeters of a 25 per cent solution of magnesium sulphate, given intravenously, gave such relief that the patient was sleeping quietly before the dose was completed. A few capsules of sodium amytal relieved him during the next two days after which he seemed fully recovered. His blood pressure on the fourth day was normal and he resumed his usual habits.

#### REFERENCE

American Journal of Tropical Medicine, International Medical Digest.

### SCREW WORMS IN MAN

#### *Report of Case*

O. F. COLLUM, M.D.  
McRae

I was called to go ten miles out in the country to relieve pain in a man who had suffered cancer of the lip for eighteen months and who had been operated upon twice, the lip being removed and most of the tissues of chin with the hope of a cure, but without success. Arriving there just at dark I was informed that the pain had increased rapidly for twenty-four hours and had become so intense that the doses of morphine he had been using had failed to give him relief. He stated that the pain was of an intensely burning character and with the hope of

getting some relief he had requested his mother to dust some powders over the raw surfaces. In her effort to do this she discovered, in a small opening in the right cheek, made for drainage purposes by the surgeon at the time of the last operation, a tiny white moving object. At this discovery she became alarmed and immediately sent for me. He further stated that two days before the onset of his severe pain he had killed what he thought to be an ordinary blow fly in his room, but was not aware of it having been near his face.

With an old fashioned kerosene lamp I began to inspect the wound and finally was able to see into the bottom of the wound, where I found a white moving object. With a pair of tissue forceps I was able to remove it with ease. On close inspection it proved to be a small screw worm. This operation was repeated many times before no others could be seen. More than fifty worms were removed. When no others could be seen I induced the man to permit the application of small amounts of chloroform and, to my surprise, he did not complain of any additional pain. After waiting a few minutes the wound was again inspected and many more worms found and removed, some of which had been killed by the chloroform. This process was repeated for the third time before no more worms could be found.

Fearing that there might be worms in other sections of this foul smelling wound, I lifted the lips on the right side of mouth, giving me a good view of the inside of the cheek, where I found some fifty more worms imbedded deeply into what seemed to be perfectly healthy tissue and giving the appearance of larval wasps in their nest. In my attempt to remove them I found that many had penetrated the tissue to a depth of three-quarters of an inch and offered definite resistance when removed. After removing all that could be seen the man agreed to a liberal application of chloroform for it did not cause any pain. When the treatment was all over he was almost asleep as a result of chloroform inhalation. His brother was allowed to treat him and reported that after several light applications of chloroform he removed about fifty more worms the following day but had seen none since.

This case was reported for the following reasons:

1. To show that these worms can and do penetrate healthy muscular tissue from which the skin has been removed and healthy mucous membranes.
2. That they produce intense pain while they work and offer resistance to removal in certain locations.
3. To caution every one to keep wounds clean, free from odor and completely protected from flies.
4. That these flies are extremely prevalent in many sections of the country.



## GEORGIA DEPARTMENT OF PUBLIC HEALTH

T. F. ABERCROMBIE, M.D., *Director*

## MALARIA CONTROL IN GEORGIA BY DRAINAGE

January 1, 1934, found the Civil Works program in Georgia at the peak of its activity with respect to malaria control drainage operations. Delays in approval of the various federal projects in Georgia, together with retarded progress in the approval and execution of local building construction projects, made it necessary for the Georgia Civil Works Administration to find an outlet for the 70,000 men on its rolls. Due to the primary social value of the work, and to the relatively high degree of planning already available as a result of the operation of State Board of Health personnel in the field in prior years, the Georgia Civil Works Administration chose to employ the major portion of its roll in South Georgia on malaria control drainage for the purpose of absorbing manpower pending the development of a balanced program. As a result, approximately 30,000 men were actively employed on hand labor malaria control drainage in South Georgia at the first of the year.

As the Civil Works program continued, gradual and considerable reductions were made in the number of men employed on this type of public health work. However, it continued to be recognized as one of the major non-federal project activities selected by the Georgia Civil Works Administration, and until the very end of the program large masses of men continued to be employed.

Our statistical report submitted for the first quarter of the year showed an average of 15,336 men employed during the quarterly period in the construction of more than 3,000,000 feet of ditches.

The close of the Civil Works program in Georgia on March 31, 1934, brought to a standstill all anti-malaria operations under this program. The second quarter of this year has witnessed steady effort to again attain momentum on this activity.

Initial activities under the FERA program in April were almost exclusively confined to the completion of uncompleted school and other public building construction activities for which CWA building materials had been purchased with federal funds. Due to the very limited funds available during this month practically no other type of project could be approved. Accordingly a total of only 803 men were employed on anti-malaria drainage in the state in April.

Later months have also witnessed great restriction of funds available to Georgia for work relief activities, but due to the steady closing out and completion of public building construction projects occupying a prior position and due to the gradual upbuilding of certified relief cases in rural counties of principal malaria importance, each month has witnessed a steady increase in forces assigned to anti-malaria drainage. A statistical report shows 803 men on malaria drainage in April, 1,627 in May, and 2,708 in June, with a quarterly average of 1,696 men employed on this type of project. Preliminary figures for July and August operations indicate for the third quarter a force ranging between 3,000 and 5,000 men. The actual size of forces employed in July equaled or exceeded the higher figure, but reductions for September as a result of meat processing activities due to cattle shipped from drought areas will tend to reduce the quarterly average.

The present trend of malaria in Georgia is represented by the spread of the disease into the North Georgia area and into many counties in which malaria has previously been unknown. It may for this reason be stated that many of the nuisance mosquito control drainage projects under way in those remaining North Georgia counties not experiencing a malaria problem at the present time possesses a very definite potential anti-malaria value.

In addition, the North Georgia area is faced with certain acute malaria problems associated with major drainage ways and resulting from silt deposits washed from surrounding hillside topography, which although limited in number and extent are as severe as any malaria problem in the most primary South Georgia county. Drainage solution of these problems primarily requires machine construction and for this reason it is necessary for health authorities to turn to the local governments rather than to relief labor. Considerable success has been met in obtaining this local governmental assistance in connection with machine drainage construction. A brief outline of three typical projects is given below.

Of great importance for malaria control are certain major and specific small river and creek problems involving machinery drainage for the main channel, followed by lateral ditches draining swamp and lowland meadows which are producing quadrimaculatus and where malaria is found quite prevalent.

About five years ago there developed a

very serious malaria problem in the present north Fulton County which at that time was Milton County. During this five-year period the State Board of Health has brought all possible pressure to bear to remedy this condition. In addition to a high malaria incidence one of the economic aspects was that farmers were leaving a good agricultural section for protection of the health of their families. During this year we have succeeded in having elaborate surveys made of this area, resulting recently in starting dragline equipment for rechanneling this stream for a distance approximately twelve miles. The approximate cross-section of this completed channel will be a 12 ft. depth by 40 ft. wide.

Very similar circumstances are connected with a major similar project in Walton County. This malaria problem is equally or even more serious. Dragline equipment was started operating on this project. Whereas at the present time this work is only being confined to Walton County, the expenditure of about \$25,000 for drainage surveys, expanding the project into two other counties, has been approved by the Georgia Relief Administration.

The third problem, nearly equal in size and of prime malaria importance, is being promoted between Clayton and Fayette Counties with prospects in view of having dragline machinery placed on this project at an early date. Secondarily to these three major machinery projects are a number of scattered projects of smaller proportions comprising maximum cross-sections of efficient hand labor construction.

It will be at least the end of the year before a considerable amount of accomplishment by excavation can be credited to these projects.

While drainage comprises by far the major portion of efforts to control malaria, certain other activities must not be overlooked in estimating and evaluating the total extent of anti-malaria measures in Georgia. Mention is made of two coastal plain counties in which extensive atabrine treatment is being dispensed to the general county population for temporary control pending the execution or completion of more permanent drainage protection, and as part of a permanent program in certain restricted areas which cannot feasibly be drained. These counties are Glynn and Dougherty. In addition Screven County has special arrangements in effect for the wholesale distribution of quinine to the general population. In several other counties a similar program is operating for protection of the general population in cer-

tain control districts. The Georgia Emergency Relief Administration has also recently purchased nearly 20,000 atabrine treatments for distribution to malaria cases on the relief rolls, and is planning to undertake its extensive distribution. This activity is in addition to considerable sums already being expended for treatment of malaria cases on the relief roll by private physicians.

Attention has been given likewise to the importance and value of proper screening in malarious areas, and while but little has yet been accomplished the Georgia Relief Administration has been advised of and is mindful of the benefits accruing to its 5,000 rural rehabilitation families as a result of screening, and it may be confidently expected that measures will be taken at a later stage of the program if special personnel can be made available.

In review it is conceded that the volume of permanent anti-malaria work in Georgia is yet too small to prevent an increase in morbidity and mortality rates in the face of any considerable increase in precipitation over that experienced in the four recent years with deficient rainfall. We are confident, however that comparison of this or of any years in the near future with past years having equivalent rainfall conditions will very clearly and definitely reveal the checking and diminution of the malaria problem in this state.

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#### BOOK REVIEW

*Surgery of a General Practice* by Arthur E. Hertzler and Victor E. Chesky, pp. 602 with 472 illustrations. Price \$10.00. C. V. Mosby Company, St. Louis, 1934.

A book that fills the gap between a so-called minor surgery and major surgery. The brevity, directness, and practicability are outstanding features. It is the opinion of a master surgeon rich with clinical experience focused upon the common surgical conditions encountered in the practice of general surgery. No effort is made to review the literature or discuss the pros and cons of the many existing surgical controversies. The volume is highly recommended to the general practitioner and makes a complete companion volume to the recent publication "Local Anesthesia" by the same author.

EDGAR BOLING, M.D.

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The Medical Association of Georgia will hold its Eighty-Sixth Annual Session in Atlanta, May 7th-10th, 1935.

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The Southern Medical Association will hold its Twenty-Eighth Annual meeting at San Antonio, Tex., November 13th-16th.



## WOMAN'S AUXILIARY OFFICERS

President—Mrs. J. E. Penland, Waycross.

President-Elect—Mrs. E. R. Harris, Winder.

First Vice-President—Mrs. Ralph H. Chaney, Augusta.

Second Vice-President—Mrs. J. M. Barnett, Albany.

Third Vice-President—Mrs. G. Hugo Johnson, Savannah.

Recording Secretary—Mrs. Warren A. Coleman, Eastman.

Corresponding Secretary—Mrs. B. H. Minchew, Waycross.

Treasurer—Mrs. Chas. H. Richardson, Macon.

Parliamentarian—Mrs. Mather M. McCord, Rome.

Historian—Mrs. M. F. Haygood, Alto.

Chairman Public Relations—Mrs. Evert A. Bancker, Jr., Atlanta.

Chairman Press and Publicity—Mrs. J. Bonar White, Atlanta.

Chairman Legislation—Mrs. Dan Y. Sage, Atlanta.

### AN INVITATION

The Woman's Auxiliary to the Southern Medical Association will meet in San Antonio, Texas, November 13th to 16th.

Headquarters for the women will be in the St. Anthony Hotel where all meetings and functions will be held.

It is earnestly desired that our women of the South will make every effort to attend this meeting "en masse." Your presence will not only help the meeting but will be a great inspiration to yourselves. San Antonio is delightful and everything possible is being done to make your visit enjoyable.

A cordial and pressing invitation is extended to everyone to attend the Auxiliary Luncheon on Wednesday, November 14th, to meet Mrs. Robert Tomlinson, National Auxiliary President, and other distinguished guests.

Most cordially yours,

MRS. SOUTHGATE LEIGH,  
*President.*

### FULTON COUNTY MEETING

The Fulton County Medical Auxiliary met September 7th at the Academy of Medicine in Atlanta. Mrs. Olin Cofer, Vice-President, presided in the absence of the President. Following the request of the State Auxiliary, Mrs. Penland's letter to county auxiliaries and "Our Objectives" for the year were read and discussed. We call attention to this in program making, because it is the only way to begin the year's work.

For the next meeting, we suggest speakers on Mother Welfare, with distribution of material and explanation of the three minute talks. Each member should be on "tip-toe" with information from her Auxiliary. Again and again during the year, let us remember the reasons for the existence of our Auxiliary and follow them closely. We have a definite plan from the National Auxiliary and the State Auxiliary and it must come first. As

Dr. Ayers said at the May convention, "By attending Auxiliary meetings and hearing health talks, you have superior opportunities to what other women have to become informed along health lines. This increased information means increased responsibility to the communities in which you live. That you will meet these responsibilities we have no doubt, and by doing so, make Georgia the best place in the world in which to live."

As Auxiliaries, it is expedient that programs be related to Auxiliary purposes and objectives. We can obtain other information from other sources, but an Auxiliary meeting should be a well down which we dip the bucket of our enthusiasm and co-operation and from which we draw the materials to sustain our membership and extend our influence.

### *Members*

Have you had your periodic health examination? Has your family? Are you remembering that the greatest asset of the healing art is your physician-husband? While we plan to honor him and his profession publicly and annually on Doctor's Day, March 30th, let us always keep his health and happiness our sacred charge and make his home a daily haven of relaxation, appreciation and love, remembering that while momentous events have their place, "It is in the dew of little things that his heart will have its morning and be refreshed."

### *Duties and Offices*

One of the charges given us is to accept offices and chairmanships in other organizations which will forward our objectives. This month we note that Mrs. Fred Hodgson of Atlanta, is President of the Georgia Tuberculosis Association and that the Director of Public Welfare and the Fourth Vice-President of the Georgia Congress P.-T. A. is Mrs. D. D. Smith, of Swainsboro. In the Health Department of the Congress, Mrs. Lee Howard, of Savannah, is Chairman of Child Hy-

giene: Mrs. A. Birch, of Macon, of Mental Hygiene; Mrs. White, Atlanta, Health and Service through Junior Red Cross. Social Hygiene is under Miss Alexander, R. N., who is beginning her third year in this chairmanship and is one of the best friends the Auxiliary of Georgia has. Send us your district, county, city chairmanships for next month. Do you know that we had 18 state offices and chairmanships this past year and over 70 in the districts, et cetera? Through them we had programs and material given in over one hundred counties. Each year should not only "hold" its own, but reach additional communities.

Three members of the Fulton County Auxiliary hold most important chairmanships in Parent-Teacher health work,—Fifth District Social Hygiene, Atlanta Council, and Home Hygiene and Care of the Sick of the Atlanta Chapter (Fulton County) of the American Red Cross. Needless to say, Auxiliary members should not only hold such chairmanships, but be training other members for such leadership. Be, Do, Grow.

In Fulton County last year (May to May) over 1,500 certificates were awarded from the National Red Cross for completion of the course, fifteen lessons of 30 hours of Home Hygiene. Members of classes included mothers, business women, teachers, mill employees, girls, both white and colored. A superintendent of schools at the exercises for the white and a doctor at that of the colored, remarked it was doubtful if any certificates awarded during June meant as much to the individual and community as these. Question, have you a Home Hygiene Course in your Red Cross Chapter and is the Auxiliary back of it? The Fulton County committee has arranged an Institute of four days, two each for white and colored, for all Home Hygiene instructors in Georgia, during the last week of October, with an instructor from national headquarters. The American Red Cross has commended the Atlanta committee.

### NINTH DISTRICT MEETING

The Auxiliary to the Ninth District Medical Society met September 19th at Gainesville, Mrs. W. R. Garner, Manager, presided. Mrs. J. H. Downey, Gainesville, welcomed the members and Mrs. E. R. Harris, Winder, responded.

Mrs. Randolph reported for Barrow County; Mrs. D. H. Garrison for Cherokee-Pickens; Mrs. Harden for Habersham; Mrs. J. H. Downey for Hall; Mrs. Ralph Freeman for Jackson; Mrs. C. L. Ayers for Stephens.

Mrs. Randolph also reported for the district historian, Mrs. Ross.

Mrs. J. E. Penland, State President, spoke, on the importance of the Auxiliary and of working out its objectives.

Dr. C. L. Ayers, President of the Medical Association of Georgia, took as his theme the "New Deal As It Influences Medicine."

Dr. James E. Paullin, President-Elect of the Medical Association of Georgia, discussed the usefulness of the Auxiliary.

Two leading offices of the State Auxiliary are now held by Ninth District members, President-Elect and Historian.

After the business meeting and program, a round table discussion on objectives was held and on the methods different auxiliaries had found successful to accomplish them. This is one of the pertinent reasons for attending district meetings.

Pamphlets on Mother Welfare were brought by Dr. Campbell, Chairman of the Cancer Commission. The Cancer Commission is giving the State Auxiliary over ten thousand. The article has been re-written and additions made using the same thought—Stop-Look-Listen—as last year. We mention this, as some members casually glancing at the pamphlets may think them the same distributed the last two years.

### GEORGIA'S HEALTH

If you do not receive "Georgia's Health" monthly from the State Board of Health, send a request for it. Hygeia has been offering excellent prices on six and eight month subscriptions if you wish to introduce it in your library or school. Sumter County Auxiliary placed yearly subscriptions in all county libraries and schools, after earning the money, 21 in all. What is your county doing?

### PART OF ABSTRACTED SCIENTIFIC PROCEEDINGS OF THE AMERICAN LARYNGOLOGICAL, RHINO- LOGICAL AND OTOLOGICAL SOCIETY

*Fortieth Annual Meeting, Charleston, S. C.,*

*April 3-5, 1934*

Part of

Symposium on Newer Clinical Approaches in  
Otolaryngology

8. The Biplane Fluoroscope in Bronchoscopy. Murdock Euen, M.D., Atlanta, Ga.

In his introduction, the author epitomized the history of removing foreign bodies in the air passages with particular emphasis on the American pioneers in this field. The biplane fluoroscope was introduced into bronchoscopy in 1915. During the early days some enthusiastic operators used it as a substitute for bronchoscopic skill with disastrous results. Grier, Jackson and Tucker, aided by Manges, Prendergrass and Pancoast, have improved the technic so that it now entails little risk.



The indications for the use of the biplane fluoroscope are when radiopaque objects in the tracheobronchial tree are unusual, irregularly shaped, with cutting edges or sharp points, or if the foreign body is beyond direct vision through the bronchoscope, either on account of its actual location or on account of associated inflammatory processes. In the esophagus pins, safety pins, large irregularly shaped objects or those that have been lodged there a long time or that are associated with strictures or other lesions also require the fluoroscope.

Two cases were reported in which the biplane fluoroscope was used. In the first, a child aged six, who had symptoms of pulmonary tuberculosis for nearly two years, a pin was found in the posterior bronchiole of the lower lobe of the left lung. The child made a prompt and uneventful recovery after the removal of the pin. In the second case, a little girl had swallowed a bobbin from a textile machine thirty months before. This had lodged in the upper part of the esophagus and had required a gastrostomy. At the time she came under the author's care, scar tissue around the bobbin had occluded the lumen of the esophagus. Under the biplane fluoroscope the bobbin was released by means of sharp dissection and extruded through the stomach. Poverty and ignorance prevented the parents from bringing the child back at frequent intervals for dilatations of the esophagus, but more than a year later she was in good condition and able to swallow almost anything.

#### Discussion

DR. CHEVALIER JACKSON, Philadelphia, Pa.: I heartily endorse all that Dr. Eguen has said. The double-plane fluoroscope, while exceptional for certain cases, does not solve all the difficulties. Sometimes the foreign body may be visible on the x-ray film but not under the fluoroscope. It is very important in this work that the proper smaller bronchus be found for the bronchoscope by careful palpation. In the hands of a skillful bronchoscopist, such as Dr. Eguen, the biplane fluoroscope is safe and is attended with a large percentage of successes. In the hands of one who has never done eye-guided bronchoscopy and who does it guided by the fluoroscopic screen the mortality is high.

DR. GABRIEL TUCKER, Philadelphia, Pa.: I wish to emphasize that both the roentgenologist and the trained bronchoscopist are necessary for these cases.

—Annals of Otology, Rhinology and Laryngology, September, 1934.

#### ANNOUNCEMENT

The Radiological Society of North America will hold its next annual meeting at the Hotel Peabody, Memphis, Tennessee, December 3-7, 1934. The medical profession is cordially invited to attend. Further information may be obtained by addressing the Secretary-Treasurer, Dr. Donald S. Childs, 607 Medical Arts Bldg., Syracuse, N. Y.

J. J. CLARK, M.D., *Councilor*.

Atlanta, Georgia.

#### NEWS ITEMS

The Seventh District Medical Society met at Coosa Country Club, near Rome, on September 26th. Titles of scientific papers on the program were as follows: *The Treatment of Infantile Diarrhea with Raw Apples*, Dr. E. O. Shellhorse, Dalton; discussion led by Dr. T. Lowry, Cartersville, and Dr. R. C. Maddox, Rome. *Contributing Factors of Infection*, Dr. R. M. Harbin, Rome; discussion led by Dr. P. O. Chaudron, Cedartown, and Dr. H. L. Erwin, Dalton. *Some Medical Facts and a Suggestion*, Dr. J. H. Hammond, LaFayette; discussion led by Dr. C. W. Williams, Cedartown, and Dr. E. M. Bailey, Acworth. *Problems Relating to Vitamin Deficiency*, Dr. James S. McLester, Birmingham, Ala., President-Elect, American Medical Association. *Some of the Endocrinological Aspects of the Anterior Pituitary with Special Reference to Therapy*, Dr. David L. Wood, Dalton; discussion led by Dr. R. N. Little, Summerville, and Dr. Lester Harbin, Rome. *Intestinal Toxemia in Children*, Dr. M. M. McCord, Rome, Councilor, Seventh District; discussion led by Dr. J. W. Stanford, Cartersville, and Dr. R. W. Fowler, Marietta. The Floyd County Medical Society entertained the members at a barbecue dinner.

The Radiological Society of North America will hold its next annual meeting at the Hotel Peabody, Memphis, Tenn., December 3-7, 1934. The medical profession is cordially invited to attend. Further information may be obtained by addressing the Secretary-Treasurer, Dr. Donald S. Childs, 607 Medical Arts Building, Syracuse, New York. Dr. Jas. J. Clark, Atlanta, is Councilor from Georgia.

For an excellent location for a physician in a small town in a good agricultural and dairying section, write the Secretary-Treasurer.

The Telfair County Medical Society met at the office of Dr. C. R. Youmans, Lumber City, on September 11th. Dr. Frank R. Mann, McRae, read a paper entitled, *X-Ray as an Aid in Diagnosing Chronic Appendicitis*; Dr. O. F. Collum, McRae, *The Differences in Children*. A general discussion by members followed.

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, on September 20th. Dr. T. C. Davison and Dr. Jack C. Norris gave a case report, *So-Called Sarcomatosis of Peritoneal Cavity*; Dr. Jeff L. Richardson made a clinical talk on *Angina Pectoris Associated with Myocardia*; Dr. Rufus T. Dorsey, *Dry Clinic*.

Dr. Chas. G. Boland announces the removal of his office to 157 Forrest Avenue, N.E., Atlanta.

Dr. Clarence L. Laws announces the removal of his office to 707 Medical Arts Building, Atlanta.

The staff of the Wesley Memorial Hospital, Emory University, held its regular monthly meeting on September 14th. The program consisted of discussions of cases as follows: *Hemochromatosis and Banti's Disease*, by Dr. S. R. Roberts and Dr. T. L. Ross; *Thrombocytopenic Purpura*, Dr. L. W. Grove and Dr. J. C. Read; *Fecal Fistula, Peritonitis Due to Extravasated Contents of Large Intestine, Abscess of Liver, and Fistula of Gallbladder*, Dr. Frank K. Bolland.

The Ware County Medical Society met at Waycross on September 6th. Dr. J. E. Penland, Councilor for the Eighth District, read a paper on *Acute Poliomyelitis*. The article was discussed by Dr. H. G. Huey, Homerville; Dr. G. E. Atwood and Dr. B. H. Minchew, both of Waycross. Dr. B. H. Minchew will be host to members of the society at its next meeting to be held at the Okefenokee Golf Club.

Dr. Alton V. Hallum, Atlanta, was elected to fellowship in the American Academy of Ophthalmology and Otolaryngology at a recent meeting held in Chicago.

The Fulton County Medical Society, Atlanta, has requested its members to give one hour each week, 4:00 to 5:00 P. M., every Friday, to a Child Health Hour as adopted by the Society on September 6th. "During this hour children are to be immunized against smallpox, typhoid and diphtheria at a cost of \$1.00 cash for each injection. Physicians are to furnish all materials. No person able to pay usual fee is eligible. Indigent patients may be immunized at the City Hall free of charge." Every member of the Society has been asked to assist in the work.

Dr. M. F. Haygood, Alto, President of the Southern Sanatorium Association, presided over the Sanatorium Section of the Southern Tuberculosis Conference and Southern Sanatorium Association meetings held at Knoxville, Tenn., October 9, 10, 11; Dr. Kellie N. Joseph, Alto, was Secretary. Dr. Louis Rouglin, Atlanta, led the discussion on a paper by Dr. Joseph B. Greene, Asheville, N. C., entitled *Laryngeal Tuberculosis, Diagnosis, Prognosis and Treatment*. Dr. Champ H. Holmes, Atlanta, led the discussion on paper by Dr. A. B. Mullen, Waverly Hills, Ky., entitled, *Further Studies in the Treatment of Tuberculous Empyema with Merthiolate Solution*.

Dr. Hugo Robinson, Albany, was elected President of the Georgia Health Officers Association at its annual meeting held in Atlanta, on August 30th. Dr. M. E. Winchester, Brunswick, Secretary.

Dr. B. V. Elmore, Rome, entertained the members of the Floyd County Medical Society at his cottage on Dew's pond to a barbecue on September 14th.

Dr. W. H. Kiser, Jr., has moved his office to 104 Ponce de Leon Avenue, N.E., Atlanta.

The Randolph County Medical Society met at the Patterson Hospital, Cuthbert, on October 4th. Dr. Robt. C. Pendergrass, Americus, read a paper entitled, *Uterine Bleeding*.

The Habersham County Medical Society and Auxiliary held their September meetings in the home of Dr. and Mrs. M. F. Haygood, Alto. Refreshments were served.

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, on October 4th. Dr. Dan C. Elkin presented patients with *Aneurysm of Subclavian Artery* and *Aneurysm of Carotid Artery*. Dr. W. Frank Wells made a case report entitled, *Plastic Operation for Congenital Absence of Vagina*. Dr. Geo. W. Fuller gave a clinical talk on *Thyroglossal Duct Cyst*. Dr. E. Van Buren read a paper entitled, *Pulmonary Tuberculosis Complicating Diabetes Mellitus*. The discussion was led by Dr. H. M. Bowcock, Dr. Joseph C. Massee and Dr. Champ H. Holmes.

The Eighth District Medical Society met at Waycross, October 9th. The program consisted of the following titles: *The Unusual Necessity for Medical Organization at the Present Time*, Dr. Clarence L. Ayers, Toccoa, President of the Association; *Chronic Malaria*, Dr. T. V. Willis, Brunswick; *Cure of Recurrent Ventral and Large Hernia by Premature Infant*, Dr. Luther M. Holloway, Jacksonville, Fla.; *The Problem of Coronary Artery Disease*, Dr. Jas. E. Paulin, Atlanta, President-Elect of the Association; *General Consideration of Gastric Pain*, Dr. W. W. Turner, Nashville; *Cancer Clinic* at the Ware County Hospital, Dr. J. L. Campbell, Atlanta, Chairman of the Cancer Commission of the Association. Dinner was served at the Hotel Ware.

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#### AGRANULOCYTIC LEUKOPENIA: REPORT OF CASE SUCCESSFULLY TREATED WITH X-RAYS AND SOME OBSERVATIONS ON EFFECT OF AMIDOPYRINE

Julien E. Benjamin and Joseph B. Biederman, Cincinnati (Journal A. M. A., July 21, 1934), report a case of agranulocytosis which was apparently amenable to high voltage roentgen therapy. During a period of good health the patient was given 10 grain (0.65 Gm.) of amidopyrine under control. This produced all the symptoms of agranulopenia within forty-eight hours. The administration of acetylsalicylic and allyl-iso-propyl-barbituric acids caused no unfavorable symptoms. Intracutaneous, patch and passive transfer tests gave negative reactions. In this patient the effect of amidopyrine was not one of an atopic nature but of hypersensitivity to the drug with the hematopoietic system acting as the shock organ.



COMMUNICATIONS  
DIAGNOSIS AND TREATMENT OF PERI-  
PHERAL VASCULAR DISEASES

To the Editor:

It is interesting to note that in the April, 1934, issue of *The American Journal of Surgery* appears a twenty-five page article on "Diagnosis and Treatment of Peripheral Vascular Diseases," by Mont R. Reid, M.D., of the Department of Surgery, College of Medicine of the University of Cincinnati, and the Cincinnati General Hospital. The lecture (Matas, Vascular Surgery lecture) was presented January 23, 1934, and Dr. Reid was rewarded with the "Matas" medal created by the Violet Hart Fund, Tulane University, for his outstanding work and contributions to the subject of vascular surgery.

In his article, Dr. Reid has presented a thorough discussion of this subject, including history, classification, therapy, etc., several pages being devoted to the therapy, instituted at his clinic. The article is well illustrated with several photographs and charts. Mention is made concerning the numerous methods of therapy which have been advocated in the treatment of peripheral vascular diseases, e. g., surgery of the sympathetic nervous system, the artificial production of fever by the intravenous injection of typhoid vaccine, spinal anesthesia, blocking the regional sympathetic ganglia with novocaine, removal of the cervico-thoracic and lumbar sympathetic ganglia, excision of segments of vessels suddenly occluded by a thrombus, or embolus, and excision of the sympathetic nerves preliminary to the ligation of large arteries. Several pages are devoted to the treatment of thrombo-angiitis obliterans, including a description of the various measures, which have been advocated for the development of collateral circulation. It is surprising to note that approximately 40 methods of treatment have been advanced by various clinicians in the past several years in the treatment of this disease, many of which are still used either single, or combined.

In his clinic at the Cincinnati General Hospital, Dr. Reid has adopted a conservative attitude toward the treatment of peripheral vascular diseases, particularly the serious and prolonged disease, thrombo-angiitis obliterans. Since August, 1932, a total of 5,574 treatments have been given in his clinic to patients suffering from organic obliterative arterial disease. As a result of the treatment there was a definite increase in the surface temperature of the affected extremities, disappearance of pain in the majority of cases, a definite increase in the circulation, improvement and disappearance of ulcers, etc. The treatment has been responsible for the saving of many limbs, which otherwise would have been amputated.

The apparatus used in the treatment is known as the "Pavaex Treatment Unit" and by means of alternating negative and positive environmental pressure to the extremities, the collateral circulation is increased. The idea of the use of negative pressure in the treatment of thrombo-angiitis obliterans is not new, for

in 1917, Dr. Samuel J. Sinkoe, one of our local members and his collaborator, Dr. I. Gottlieb, of New York City, reported 25 cases treated at the Mount Sinai Hospital, New York City, with gratifying results. The article was published in the *Journal of the American Medical Association*, March 31, 1917, and was entitled, "Thrombo-angiitis Obliterans." The conservative treatment by "Bier's Hyperemia Suction Apparatus." The conclusions in his article published at that time were as follows:

1. Admitting that many cases run a progressive course, the only treatment for which is amputation, we still firmly believe in conservative treatment for the majority of cases.

2. The various measures resorted to in the conservative treatment of this disease have proved, in the majority of cases, to be either of only temporary value or of no value at all in alleviating the symptoms.

3. The hyperemia suction treatment gives results unsurpassed by any other method available.

4. The beneficial effects observed are: increased warmth of the parts, improvement of the color, alleviation of pain, and more rapid healing of ulcerations.

5. Although occasionally a patient may not respond to this treatment, and some cases are too far advanced for benefit to be received by it, the improvement observed in the vast majority of cases is so evident that we firmly believe that this method deserves a definite place in the conservative treatment of thrombo-angiitis obliterans.

Full credit must, therefore, be given Dr. Sinkoe and his collaborator, who were the first to apply this method of treatment to patients suffering from thrombo-angiitis obliterans. Atlanta medicine is to be congratulated for its additional contribution to the progress of modern medicine and surgery.

THEODORE TOEPEL, M.D.

Atlanta, Georgia.

September 21, 1934.

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WEST POINT ROUTE, LOUISVILLE AND  
NASHVILLE AND SOUTHERN PACIFIC  
LINES TO THE  
SOUTHERN MEDICAL ASSOCIATION  
MEETING

The advertisement in this issue by the West Point Route, Louisville and Nashville and Southern Pacific as forming a through route for the trip to San Antonio for the meeting of the Southern Medical Association affords the Georgia physicians an easy means of attending the convention by either making a direct through trip or spending a day in New Orleans between two nights of travel.

Many doctors have friends in New Orleans with whom a day would not be lost, to say nothing of visits to Tulane and the various hospitals.

Or, if no stop is desired, it should be easy to assemble a sufficient number in Atlanta from Georgia

and the Carolinas, who would naturally flow through this gateway, to secure through sleepers to San Antonio without change at New Orleans, if a date suitable to all could be agreed on. The dates shown in the advertisement are only suggestions for illustration. The trains are daily and other dates could be used.

And New Orleans is the gateway through which Florida, Alabama, Mississippi and Tennessee would naturally flow. A large party, probably a special train, will be assembled at New Orleans.

And there is a very attractive Post-Convention trip to Mexico City for those who can spare the time to visit that country, about which Secretary Loran, of the Southern Medical Association, at Birmingham, has sent each member a descriptive folder. If one has not reached you it can be had from the agents whose names appear in the advertisement.

They will also furnish the schedules for the return trip from San Antonio and make your reservations.

#### COCOMALT

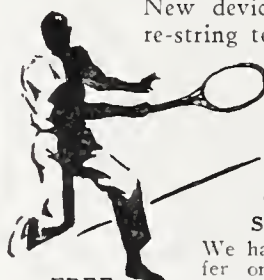
Clinical tests prove conclusively that pregnancy is a drain upon the woman's calcium reserve. Very often this is manifested by softening of the bony structure . . . including the teeth. It is a well-known fact that pregnant women very often have decaying teeth, and even loose their teeth during pregnancy.

Such women need their calcium intake increased—and their ability to mobilize calcium augmented. For

the drain upon calcium is so great at times as to actually abstract calcium from their bones and teeth.

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# THE JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA

DEVOTED TO THE WELFARE OF THE MEDICAL PROFESSION OF GEORGIA  
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## HODGKIN'S DISEASE\*

WM. M. CASON, M.D.  
*Sandersville*

It is ordinarily a simple matter to classify abnormal swellings into inflammatory masses or neoplastic growths, but there is one type of tumor, that of Hodgkin's disease, or lymphogranulomatosis, which has caused, and is still causing, a great amount of confusion, both as to terminology and as to classification.

The term Hodgkin's disease, first employed by Samuel Wilks, in 1856, in honor of Thomas Hodgkin, who described it in 1832, is still the common current name in English speaking countries. In other lands the name lymphogranulomatosis is more frequently employed. This name was applied to the disease in 1899 by Sternberg, the first to describe clearly its histologic features and to separate it thereby from similar processes. He, however, felt that it was an unusual type of tuberculosis, and as a consequence its complete establishment as a distinct entity is due to Dorothy Reed, who followed three years after Sternberg. Since her work cleared the field more than three decades have passed, and unless the etiologic studies of the future change our conception, it is always likely to remain a distinct disease.

### *Definition*

Hodgkin's disease has been defined as a systemic disease characterized by an enlargement of the lymph glands, anemia, and a fatal termination. It would probably make it more clear were we to define it as a clinical syndrome, characterized by a more or less systemic lymphadenosis of a specific histologic character, involving more frequently

the lymph glands of the neck and thorax, especially in the early stages. It is primarily a chronic disease of the reticulo-endothelial system involving the lymph nodes, lymphatics, skin, red bone marrow and spleen resulting in anemia and a fatal termination.

### *Etiology*

Although this disease was discovered more than a hundred years ago the cause still remains obscure. It may be a type of tuberculosis of the lymph nodes as Sternberg believed; a type of avian tuberculosis as advanced by L'Esperance; an infectious process, as Clarke, Reed, Longcope and others point out; a neoplasm, as Gibbons, Mallory and Warthin contend; a disease of the hemopoietic system as Symmers believes or perhaps it is better to accept Ewing's point of view when he states that he thinks the origin and clinical significance of the disease are utterly obscure.

Certain features suggest an acute infection, such as rapid course of some cases, the association with local irritation in the mouth and tonsils, the frequency with which the disease starts in the cervical glands, the gradual extension from one group of glands to another, and the recurring exacerbations of fever. Bunting and Yates described a diphtheroid organism with which they produced in the monkey a chronic lymphadenitis clinically resembling Hodgkin's disease but their results were not conclusive. Possibly the disease is a spirillosis for we find an eosinophilia, the presence of eosinophilic cells in the glands, and the influence of arsenic. Whatever its cause, it is a widely spread disease occurring in practically all of the countries of Europe, North and South America. Race does not appear to be a predisposing factor, but reports of the disease in the Negro in the United

\*Read before the Sixth District Medical Society, Milledgeville, December 6, 1933.

States are by no means in proportion to those reported in white persons.

A majority of cases occur in young adults. Most investigators report that it occurs more frequently in the third and fourth decades but in some series of cases it occurs almost as frequently in the second and fifth decades. It occurs more frequently in males than in females; the proportion given by some is two or three times as frequently but this estimate is probably a little high. Twins and sisters have been known to be attacked. Pregnancy appears to have an unfavorable influence on the course of the disease for it may become acute and rapidly fatal.

#### *Morbid Anatomy*

Hodgkin's disease is primarily a disease of the lymph glands. Usually beginning in one group, it ultimately involves all or nearly all of the lymphadenoid tissue of the body. It is usually accompanied by the formation of granulomatous masses in the viscera, and by anemia and cachexia. Acute and chronic forms occur. According to most observers the cervical glands are most frequently affected.

From a perusal of the literature it appears that the superficial glands are more frequently affected than the deeper groups. In some cases the enlargement is limited to the internal glands. Symmers, in 1924, found the abdominal and thoracic glands involved ten times as frequently as the cervical, and in four of his cases the latter group was not enlarged at all. The brunt of the attack in Hodgkin's disease is borne by the lymph glands of the abdomen, thorax, neck, axillae and groins and by the auxiliary system of lymphoid tissue, including the liver, spleen and other residuary lymphoid collections in various parts of the body; while the vast array of lymphoid follicles which lie in the submucosa of the gastro-intestinal and urinary tracts practically escape intact.

The extension of the disease from the primary focus is usually by way of the lymph streams to the next group of glands in the course of the flow of lymph. In the generalization of the disease, which may occur with great rapidity, when practically all of the lymph glands of the body become affected,

it is often impossible to trace the course of the infection. The size of the several glands varies greatly, partly because all of them are not involved simultaneously, and partly because in the later stages of the disease the increasing fibrosis results in diminution in size. Because of the fibrosis the consistency of the individual glands varies; some are hard, others soft. In most cases the glands are discreet, and not adherent to each other nor to the surrounding structure but in a considerable number of cases the capsule becomes infiltrated and the surrounding tissue may be extensively invaded. The tonsils are rarely involved in Hodgkin's disease but the lymphatic structures of the tonsillar ring may show marked hyperplasia.

The most extensively invasive cases of Hodgkin's disease have had the primary focus in the mediastinum and have been thought by many to have originated from the thymus. These growths invade the surrounding organs and tissues and may present in this respect all the vigor of a malignant tumor. The spleen is invaded in about 75 per cent of all cases. In young children the enlargement may be great, but the organ rarely reaches the size of the spleen in ordinary leukaemia. In more than half of the cases lymphoid growths are present. In about 50 per cent of cases the spleen is nodular but in most cases the nodules are not palpable on the surface. There is probably a primary splenic form of Hodgkin's disease. In about 60 per cent of the cases the liver is enlarged and its surface is sometimes roughened with nodular elevations. Usually the liver and spleen are both involved but rarely the liver alone.

Hodgkin's disease of the gastro-intestinal tract occurs in two forms. First, we find the lesions almost entirely limited to the stomach and intestines. Second, we recognize the lesions as a part of a more generalized type of the disease. The lesions are usually limited to the stomach and the upper part of the small intestines but they may occur in the colon and in the pancreas.

Lesions in the lungs usually result from the extension of the disease from the peribronchial lymph glands. The invasion occurs



either as a solid massive growth into the hilus of the lung giving a lobulated shadow in roentgenograms, or it extends for varying distances into the lung as white radiating bands following the interlobular lymphatics. More rarely, isolated nodules, usually small, may be scattered through the lungs.

The heart and pericardium are usually not involved unless there is massive growth in the mediastinum. In that case the heart may be displaced and there may be hypertrophy of the heart as a result of the effort to overcome the resistance to the flow of blood caused by pressure of enlarged glands upon blood vessels. Invasion of the walls of blood vessels has been observed. The bones and marrow show lesions of the disease in a considerable proportion of the cases. Symmers believes that the bone marrow is concerned in all cases. Hammer suggests that the bone marrow may become involved before the lymph glands and this may be a good point to remember from a diagnostic standpoint.

The skin is frequently involved. Lesions of the skin occur in two forms. First, there are non-specific lesions resulting from infection and toxemia without the characteristic histology of the disease; for example, pruritus prurigo-like exanthema, urticaria, papillary efflorescences, toxic bullous erythema, bronze-like pigmentation, petechiae, edema, and second, there are more rarely specific granulomatous infiltrations of the skin. In some cases both types of lesions are found in the same patient. On section the gland presents a grayish white semitranslucent appearance, broken by intersecting strands of fibrous tissue. There is no caseation or necrosis unless secondary infection occurs.

### *Histology*

Histologically, Hodgkin's disease is a diffuse granulomatous process primarily in lymphadenoid tissue, and characterized by a confused mixture of an extraordinary multiplicity of cell forms,—small and large lymphocytes, endothelial and epitheloid cells, fibroblasts, mononuclear and multinuclear giant cells, eosinophiles and often polymorphonuclear neutrophiles and plasma cells. It differs from the ordinary form of tuberculous lym-

phadenitis in that the latter is "patchy" in its distribution and is disseminated in discrete or confluent foci throughout the affected glands; while in Hodgkin's disease the lesions are more uniformly diffused throughout the glands.

In Hodgkin's disease all the cells which compose the lymph glands proliferate; not always at the same rate, nor in the same degree at the same time. By this means a remarkable cellular composite results. For this reason, the cellular variations observed at different stages of the disease are quantitative rather than qualitative, and cause no essential modification of the fundamental histologic character. Occasionally, at least in some glands, other cells may so far outstrip the giant cells and fibroblasts that the histologic structure becomes so cellular as to suggest sarcoma or leukaemia. In the later stages of the disease, the connective tissue predominates, other types of cells diminish in number, and are found scattered irregularly, singly or in groups, in a dense fibrous stroma.

The characteristic giant cells, the so-called lymphadenoma cells, possess abundant cytoplasm and usually several, oval, or irregularly shaped nuclei at or near the center of the cell, thus differentiating from the Langhans giant cell of tuberculosis.

Goldman and Kanter considered the presence of eosinophiles of value in the differential diagnosis. During believed that although eosinophiles are not peculiar to Hodgkin's disease, there is no other condition in which they are found in such numbers. Whenever tuberculosis occurs as a secondary infection the two processes may be readily distinguished.

### *Symptoms*

The four outstanding complaints among Hodgkin's disease sufferers are tumors, fever, weakness, and itching of the skin. They may all be present at the same time and in the same patient, or only one of these complaints may be encountered. To these cardinal symptoms are frequently added a great variety of disturbances due to pressure or involvements of various tissues and organs. We find cough and dyspnoea in patients with mediastinal and lung involvement, indiges-

tion, gas and particularly pain in abdominal involvement. Pain, disturbances of sensation and paraplegias are found in central nervous system involvements and a great variety of skin manifestations in the dermatologic cases; hence, such names have arisen as cervical, general superficial, mediastinal, retro-peritoneal, splenic, cutaneous, gastro-intestinal and larval Hodgkin's disease. Depending upon the rapidity of progress and the intensity of the symptoms, a further classification into acute and chronic Hodgkin's disease is properly made.

The enlargement of lymph glands and lymphatic tissues is a constant phenomenon but may not be demonstrable in the acute abdominal and especially in the gastro-intestinal cases during life. Occasionally, even in the localized cervical cases, there is a history of weakness or pruritus extending over weeks and even months before the tumors are discovered. The extent and size of the lymph gland enlargement varies immensely from case to case, and has no definite relationship to the toxic and the general symptoms. In many cases there are fluctuations in the size of the masses, even noticeable to the patients themselves. The glands of the neck are most frequently involved.

#### *Fever*

Fever is a constant but variable symptom. It is occasionally the initial symptom and in many of the acute abdominal cases it dominates the whole picture and makes the diagnosis obscure. It may be constant or remittent, but is most often intermittent and paroxysmal. It is frequently accompanied by chills and much more often by sweats.

#### *General Weakness and Malaise*

The complaint of exhaustion on the slightest effort is an extremely common note made at the original examination. It is frequently out of all proportion to the general appearance of the patient and the findings on physical examination. General aching in the muscles and joints, and mild neuralgias, are exceedingly common and are probably due to toxic absorption. Actual pain, due to pressure, is more common in the abdominal type, but may occur in any locality.

#### *Pruritus and Skin Lesions*

Pruritus is an initial symptom in only a small percentage of cases. It may be confined to the extremities but is more commonly general in character. It is sometimes very intense and renders life miserable to the sufferer. It usually disappears with other manifestations of the disease under treatment but is likely to recur in exacerbations. Irradiation of the region involved, or surgical removal, even in the presence of the disease elsewhere may relieve it. Of the gross skin lesions, bronzing, moderate thickening and drying are the most frequent.

#### *Mediastinal and Respiratory Symptoms*

Cough, usually of a paroxysmal, brassy, non-productive character is often distressing but is frequently relieved by treatment. Dyspnoea occurs in about 20 per cent of the cases and is usually due to the pressure of mediastinal masses. Congestion of the face and neck are common in patients with mediastinal involvement. Large mediastinal tumors frequently give no symptoms.

#### *Abdominal Symptoms*

Indigestion, flatulence and vague distress are common when there is abdominal involvement. Pain from pressure of retro-peritoneal glands on nerves may be very severe. The actual larval form which simulates typhoid fever is not common. Bone invasion is infrequent and only bones with red marrow are involved.

#### *The Blood*

While the blood picture is a very variable one, and not to be relied upon alone in the diagnosis of Hodgkin's disease, it is nevertheless indispensable in the differential diagnosis and the control of treatment, and is of considerable value in prognosis. It affords the quickest and easiest method of separating and excluding the leukemias, and is frequently suggestive of Hodgkin's disease. Anemia is always present. Of the white blood cells, the commonest conditions seen is a moderate polymorphonuclear leukocytosis. However, leukopenias and moderate lymphocytosis are not uncommon. An increase in the blood platelets and transitional cells, said by some to be always present, are not found in many cases. The eosinophiles are very variable and



not always high. In patients ill longer than one year there is usually a leukocytosis which may reach 100,000 per c.mm. with the neutrophils forming between 70 and 90 per cent.

### *Course*

Acutely ill patients, especially those with the intestinal type of the disease, live only a few weeks. Chronic cases, extending over years, have been recognized and are generally regarded as rare. Dr. G. A. Roberson of New York, reported in 1928 a case in a young man who lived thirteen years after the diagnosis was made.

### *Treatment*

Irradiation is now recognized as the most effective means of combating this disease. When this treatment was first instituted, the entire lymphatic system of all patients was usually subjected to the x-rays as a prophylactic precaution. It was observed that this produced a destruction of the blood forming apparatus. Now the best results are obtained by irradiating only the areas involved, using a dose up to the point of a mild erythema. An attempt is made to destroy the involved glands at one treatment. The patient is given no more x-ray treatment until other glands become enlarged and in the interim the patient is placed on a liberal diet, accompanied by plenty of rest, fresh air, sunshine and arsenic medication. While radium has been and is still being used in some cases it has been discarded by most experienced men in favor of irradiation. Surgery is occasionally recommended but is not often advantageous.

### *Report of Case*

A colored woman, aged 36, was first seen October 9, 1932, complaining of fever, weakness, dyspnoea, choking, and difficulty in hearing. The family history was essentially negative. The past history revealed influenza in 1918. She had suffered "throat trouble" for the past seven years and her tonsils were removed six years ago without relief. All teeth were removed a year ago without improvement of her condition. She had noticed fullness in the ears and progressive deafness for the past six years. The swelling in the neck had been present five months.

Physical examination: The patient is a well-developed negro woman with a dark skin. There are three masses palpable beneath the skin at the base of the neck on the left side, each about the size of a pigeon egg. The masses are firm and not painful to the touch. There are two palpable masses beneath the

skin at the base of the neck on the right side, each about the size of a large pea. There is a pale, edematous appearance to the soft palate, uvula, and fauces the likeness of which I have never seen before. The throat is reduced to a rounded opening about half its normal size. There are no other glands palpable. The temperature is 100.8, pulse 108, respirations 22, blood pressure 125 systolic and 60 diastolic. The spleen is palpable but not tender. We suspected Hodgkin's disease.

Examination of a gland which was removed from the left side of the neck was made by Dr. Everett L. Bishop on November 13, 1932 and the report was "a typical case of Hodgkin's disease." Since the patient was not able to pay for x-ray treatments and no free treatments were available she was placed on a liberal diet, complete rest, plenty of fresh air, sunshine and Fowler's solution. She did fairly well for a short time but finally died in February of this year.

This case is reported because Hodgkin's disease is a rare disease among negroes and is encountered less frequently in the female than in the male.

## INVOLVEMENT OF THE CORNEA IN ARSENIC POISONING—REPORT OF A CASE

A. V. HALLUM, M.D.

*Atlanta*

This is the fifth case to be reported of corneal complications arising during arsenic poisoning.

Case Report: R. T., colored boy, age 7, was seen in the eye clinic of Grady Hospital, February, 1933, complaining of poor vision that developed following three or four weeks of severe illness eighteen months previous. In conversation later with the physician who attended the patient during his acute illness it was learned that the patient suffered an attack of arsenic poisoning after eating peaches from a tree that had been recently sprayed with an insecticide. He had all the textbook symptoms of chronic arsenic poisoning except those indicative of an action upon the peripheral nerves giving rise to polyneuritis and atrophy of muscles involved, and those indicative of an action upon the central nervous system giving rise to mental symptoms. During the stage of exfoliative dermatitis the lids were markedly swollen, and ulcers developed on both corneas with perforation of the left cornea followed by intraocular infection. The Wassermann was repeatedly negative.

Physical examination: Essentially negative except for the eyes and many large, flat, irregular scars on all parts of the body. Vision: Rt.—fingers at 3 ft., Lt.—no light perception. There was a large subconjunctival cyst, 1.5 cm. by 1.5 cm. arising from the left lower culdesac. The motility of the eyes was limited in the extreme excursions because of adhesions between the palpebral and ocular conjunctiva. The lids were literally adhered to the globes. The conjunctiva was dry, thick and leathery, the crypts and folds in the shallow lower culdesacs contained cheesy debris and muco-purulent material.

The right eye was normal, except the cornea was gray, dry, lusterless, almost insensitive, and the lower two-thirds was more densely opaque than the upper one-third. Slit lamp examination of the cornea showed the surface of the epithelium was comparatively irregular and very opaque, so that the details of the underlying layers could not be discerned.

The left eye was shrunken and soft. The cornea was flat, and exhibited a similar but more advanced condition than that of the right cornea. The left eye was enucleated and the subconjunctival cyst was dissected March 9, 1933. Dionin was used in the right eye regularly without decreasing the amount of scars in the right cornea. An iridectomy above was performed on the right eye August 3, 1933, but inasmuch as this did not materially improve his vision he was admitted to the State School for Blind January 8, 1934.

Histological study of the left eye showed the corneal surface was very irregular and covered by several new layers of epithelium. The epithelium varied much in thickness and the outer cells were flat and translucent not unlike epidermis. Bowman's membrane was completely destroyed and almost all of the outer one-third of the stroma was replaced with fibrous tissue which was very vascular. The remainder of the eye presented changes typically found following intraocular infection.

Hegner reported the first similar case in 1917 that developed following the third injection of neoarsphenamine. The cornea underwent necrosis and perforated, necessitating enucleation.

Kirby reported three cases in 1929 that developed following the 4, 5, and 7 respective injection of neoarsphenamine. He was able to preserve practically normal vision in the first two cases by surgical removal of the diseased corneal epithelium followed by the application of 3.5 per cent tincture of iodine.

Some dermatologists consider the skin reactions from arsenicals to consist of angio-neurotic phenomena. Arsenic has been proved to accumulate in the skin, and it is excreted in the urine and feces. Conjunctivitis is probably the most frequent and usually the first sign of arsenic poisoning, and its appearance during the course of treatment of syphilis warns of danger and calls for longer postponing the next injection of the arsenical.

#### Comment:

1. Corneal involvement in arsenic poisoning is a rare complication.

2. The corneal changes may be due to actual toxic degeneration and an exfoliation involving the corneal epithelium similar to the skin lesions, followed by secondary infection, but it is quite likely that trophic changes following disturbance of sensation is another factor to be considered.

3. Conjunctivitis developing during the course of treatment of syphilis may be a warning of impending arsenic poisoning and an indication to longer postpone the next injection of the arsenical.

Fulton County Medical Bulletin—Feb. 1, 1934.

## PRECONCEPTIONAL AND PRENATAL INFLUNCES AFFECTING THE NEWBORN

In a study of 5,564 live Negro births during 1930, 1931, and 1932 it was found that there was a distinct seasonal variation in births, the greatest average being in the first, or winter quarter corresponding to the conceptional period occurring in spring.

Umbilical hernia occurs frequently in the negro, an average incidence of 270 per thousand. In a charity white group the incidence was 82 per thousand. When the seasonal variation in the frequency of umbilical hernia was studied it was found that the period of greatest frequency was in the fall quarter of the year when the rate rose to 386 per thousand. This group was conceived in midwinter, or the first quarter of the year.

Prematurity is also very common in the Negro, occurring twice as frequently as in a corresponding white group. The season of greatest frequency was the fall quarter, a rate of 133 per thousand as compared with a rate of 86 per thousand in the winter quarter.

Deaths during the first week of life rose from an average of 41 per thousand in the spring to a high of 58 per thousand in the fall, the latter having been conceived in the winter quarter.

In an experimental study of 125 Negro mothers with negative Wassermann reactions who were fed 20 drops of viosterol daily for an average period of six weeks before delivery, it was found that 93 of their infants weighed an average of four ounces more than a control group born during the same period.

To summarize: There is a sharp rise, in the fall quarter, for the incidence of umbilical hernia, prematurity, and deaths during the first week of life. These weaknesses occur in infants whose conception occurred during the first or winter quarter. The highest rate of conception, as indicated by birth rate, occurred during the spring quarter.

Since the pigmented skin of the negro is known to filter out much of the available ultraviolet light it seems not unreasonable to assume that deficiencies in vitamin D play an important part in causing these defects and may partially explain the increased frequency in the Negro, especially when pregnancy begins in mid-winter.

It would seem that the periods of greatest importance to the well-being of the new-born infant are those months immediately preceeding pregnancy and the early months of pregnancy.

Abstract of an article in the J. Amer. Med. Asso., 101: pp. 1703-1705 (Nov. 25), 1933.  
Lee Bivings, M.D., Atlanta.

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The United States Department of Labor has made a brief study of maternal deaths in fifteen states, reported in Bureau Publication No. 221. The report is for sale by the Superintendent of Documents, Washington, D. C. Price 5c.



## THE PREVENTABILITY OF CANCER\*

G. T. BERNARD, M.D.

*Augusta*

When one reviews the tangible results in the crusade against cancer it must be with mingled feelings of optimism and hopelessness. The intensive campaigns sponsored by the American Society for the Control of Cancer and the American College of Surgeons have aroused nation wide interest and have demonstrated that cancer is in many instances a curable disease. The collected records of several thousands of five year cured cases now on file with the American College of Surgeons, (and this number will increase from year to year), are a great force in combatting the deep rooted idea in the minds of many people that cancer is incurable. This belief has done and still is doing a great deal of harm, causing many to avoid an examination for any trouble that they think might possibly be pronounced cancer. Such people prefer to live on in ignorance as long as possible, believing that if they should have cancer there is no hope for them. Strangely enough this belief is not always confined to the more ignorant class of people. Consequently the growing list of proved cured patients will conclusively combat this mistaken idea.

The American College of Surgeons has thrown its tremendous influence throughout the entire country, recommending and aiding in the establishment of cancer clinics, the keeping of accurate records and follow up systems. Specially prepared articles for popular reading are furnished to newspapers and magazines, lectures and motion pictures are furnished for the education of the laity and the profession alike.

Under such a veritable bombardment it is hoped to break down prejudice and misconception and to bring about such a spirit of co-operation between an enlightened public and an enlightened profession that the cancer problem will in a measure be solved.

The gist of all this propaganda is the often heard expression that advanced cancer

is incurable and that the only reasonable hope for the cancer patient is to have an early diagnosis and treatment in the earliest stages of the disease. The repetition of this teaching in season and out of season, has at last made it so familiar that one hesitates to mention it again.

To be sure some encouraging results are being noted; many patients are coming for examination of suspicious lesions and more cancers are being seen in their earlier stages than was the rule heretofore. This is as it should be and no effort should be spared to continue the fight along these lines.

There is, however, a darker side to this picture, and it is this thought that inspires the subject of my paper.

It will probably be a long time, if ever, that the average patient will have an early diagnosis of a trouble that begins insidiously and in the beginning causes neither disability nor pain. A familiar experience, is to see the man of fifty-five or sixty, careful to have his urine and heart examined at regular intervals, his blood pressure taken on the slightest provocation, his digestion good and his prostate causing no trouble,—happy in the belief that he is advancing into old age sound of wind and limb. This same man did not heed the sensation of fullness in his perineum nor the little evidence of blood from a bothersome pile. One day the bleeding being more profuse than usual an examination shows a moderately advanced or even hopelessly advanced cancer of the rectum.

Or the woman of thirty-five or forty who had a lump in her breast since the birth of her baby fifteen years before. Innocent lump surely. But it didn't stay innocent. It became sore, increased a little in size. When she consulted her doctor he removed it promptly; it was found to be cancer. Probably every one of us can recall instances like these, all going to show the extreme difficulty of early diagnosis even in intelligent people.

And furthermore, the lot of the cancer patient who has an early diagnosis and the best of treatment is far from a happy one. The uncertainty of cure from the very beginning, the long years of suspense with the ever present dread of recurrence or metastasis

\*Read before the Medical Association of Georgia, Augusta, May 10, 1934.

is a sword of Damocles hanging over these people. "Once a cancer patient always a cancer patient," illustrates my meaning. We speak of five year cures and still this disease may crop out ten years, fifteen years or twenty years after an apparent cure. This deplorable fact has caused someone to cynically observe that a patient cannot be said to be cured of cancer until he is safely dead from some other disease.

Having these thoughts in mind, I wish to express my feeling of gratitude for every agency that is contributing to the doctrine of early diagnosis,—in no sense should we let up one jot or one tittle in the work of disseminating information as to the salient facts of cancer and the necessity for early treatment. But are we not prepared to take a more forward step and apply more vigorously the principles of cancer prevention? Surely in prevention a much more worth while service will have been rendered than can ever be rendered by the hope of a more or less doubtful cure.

A basic fact is that cancer never develops from a healthy tissue or region, but always from some pre-existing abnormality. Many of these pre-existing conditions are in obscure parts of the body and are not discoverable. Here of course the principle of prevention cannot apply, and cancers developing in these locations will probably continue to yield a very small percentage of cures. But in such organs as the skin, oral cavity, breast and uterus, structures that furnish a very large percentage of cancers, it seems to me both reasonable and right that more attention should be given to the precancerous lesion.

It is not my purpose to put forward a dissertation on just what the term precancerous implies. Such terms as "borderline," "cancer-like," "potentially cancerous" and so on are frequently seen in the literature. It is recognized that not all of the abnormal tissues having the above designations must of necessity gravitate into cancer, but the fact remains that there does exist a precursory stage of cancer and we know clinically that when cancer does develop it is preceded by this precancerous condition. As to just what takes place in the evolution of the ordered

cytology and whether cancer comes about suddenly or as a gradual transition is a problem for the pathologist and is beyond the scope of this paper.

Rather would I confine myself to those definite clinical conditions and entities that experience teaches us are oftentimes followed by cancer and to them all I would give the appellation of precancerous lesions.

In the skin, warts, moles, nevi, scars from burns, scars from healed lupus, keratoses and skin tumors are all potentially the fore runners of cancer. Perhaps the most common precancerous skin lesion is the keratosis. This is a patch of scaly built-up epidermis found about the faces of out door people with harsh weather beaten skins. Ten per cent of keratoses will develop into skin cancers. Fortunately most cancers arising from keratoses are of the basal cell type and most of them are readily curable. However, a basal cell cancer once getting out of control can kill just as readily as any other cancer. To be sure they do not metastasize, and grow slowly, but they are tremendously destructive and are oftentimes most refractory to treatment. The keratoses from which they develop are always curable.

Moles are very common. There is scarcely an adult who has not one or more of these little growths. I do not wish to be fanatical and to advocate the removal of all moles, for certainly there are millions of them that never cause trouble. Perhaps a safe rule would be to remove any mole that is so situated as to be the object of repeated traumatism. A further rule and this one should be inflexible,—any mole, regardless of its position, shape, size or color that shows signs of activity should be removed at once. And by signs of activity, I mean itching, pain, inflammation or growth. Even with this rule there will be one dangerous condition that may not be averted. That is the blue black mole that becomes a melanoma. This growth is so frightfully malignant that as a rule by the time the diagnosis can be made wide dissemination has already taken place. In this instance, prevention is everything. A blue black mole once becoming a melanoma, treatment is as a rule useless. Wide excision of the mole may result in prompt healing of



the wound and no recurrence locally, but in a few months the disease will likely show up in distant parts of the body.

Leucoplacic patches on lip, tongue and buccal mucosa, whether syphilitic or the result of irritation may be either removed or at least arrested. Oral cleanliness, dental care and abstinence from tobacco will definitely prevent these precancerous lesions from becoming malignant.

There is no such thing as an absolutely benign tumor. All new growths represent a perversion of cell activity. When slowly growing, of mature form and enclosed in a capsule we speak of them as benign. But it is well known that sebaceous cysts, adenomas, fibromas and fibroids may take on a malignant change. Even the lipoma considered to be the most benign of tumors and stated by most text books to never cause trouble except from growth and pressure will rarely undergo cancerous degeneration. We have had two such cases, large lipomas that could have, and should have been removed years before, showed sarcomatous elements and both patients promptly died, one from local recurrence and the other from metastasis.

The female breast furnishes 17 per cent of all cancers. It is a discouraging fact that this structure standing out prominently in front of the body, open to inspection and palpation should yield so large a percentage of cancer. It is a further lamentable fact that the average case of cancer of the breast delays six months between the first symptom and the first visit to a physician. It is stated on authority of the American Society for the Control of Cancer that the possibility of a cure decreases 16 per cent with every month of delay in securing adequate treatment. If this be true a six months old case has lost 96 per cent of her chances for recovery. It is no wonder that our results in breast cancers are so bad.

The precancerous lesions in the breast are the benign tumors, the lumps incident to and following lactation, the lumps following traumatism, cysts, eczematous patches involving the nipple, and bleeding from the nipple. Bleeding from the nipple in a young woman may not mean much, but bleeding from the nipple in the middle aged woman with or

without a palpable lump is of grave significance. Bloody discharge from the nipple means cancer of the breast in 50 per cent of instances.

Multiple lumps in both breast have not the evil significance as one lump in one breast. The adenoma in the breast of the woman of twenty-five will likely become the adenocarcinoma in the breast of that same woman at thirty-five.

The removal of an innocent tumor from the breast is a small matter, causing as a rule, little inconvenience, danger or pain. The prognosis in cancer of the breast, no matter how early the diagnosis may be made nor how radical may be the operation is always a matter of doubt.

Some growths are so malignant that in a few weeks time cells may have left the investing capsule and become disseminated. The radical Halstead has no control over the avenues of metastasis either to the opposite breast or the lymphatics which perforate the chest wall or the lymphatics draining to the glands beneath the diaphragm and so on to the liver. These factors are to be considered possibilities even in early cancer of the breast.

The female genitalia furnish 26 per cent of all cancers and most of these develop in the cervix. It may be assumed that if a very early diagnosis could be made a reasonably high percentage of cures might result. This happy state of affairs does not exist at present. With all that has been said in an effort to induce women to have periodic health examinations, to warn them that on the first sight of bleeding when there should be no bleeding, that they should consult their physician at once, there is a sickening regularity of cancer of the cervix coming for treatment anywhere from six months to a year after initial symptoms appeared. The prognosis in these cases is far from good. It is understood that there is a direct relationship between child bearing and cancer of the cervix. The traumatisms incident to labor furnish the soil on which epithelioma of the cervix develops. The more children a woman has the more likely is she to have cancer of the cervix. The woman who has borne no children and has had no infectious disease about

the vagina or cervix is not likely to have cancer. The lacerated cervix that did not heal, gaping open, eroded, ulcerated and infected furnishes a most fertile soil on which cancer can, and many times does develop. In plain view, easy of palpation and inspection it seems that here the principle of cancer prevention should find its widest scope. I would not advocate meddlesome nor unwarranted surgery, but when such a cervix is seen its proper repair seems to me a most advisable procedure. The argument may well be made that with a woman in the child-bearing period of life why repair her cervix and have a subsequent delivery break it open again. Just when such a cervix should be repaired is a difficult question to decide, but surely the use of the cautery in these cases should clean up the infection and such patients should be most carefully watched until such time as the cervix may be transformed into a healthy region and the menace of cancer removed. One of my obstetrical friends insists on every patient returning six weeks after delivery for a complete examination. Careful note is taken of any unhealed tear and attempts are made to make it heal before the patient is dismissed. If such care were taken by all men doing obstetrics I think this one thing would go a long ways towards reducing the incidence of cervical cancer.

In conclusion may I reiterate; advanced cancer is hopeless, early cancer is dangerous and doubtful in its prognosis,—the precancerous lesion where accessible can be destroyed. Its eradication is good practice, good surgery and good sense.

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*Discussion on Paper by Dr. Bernard*

DR. EDGAR R. PUND (Augusta): This is the kind of paper from which we all may profit and it is presented by a man whom I can say from experience practices what he preaches. In this discussion I wish to emphasize four particular points.

First, it is necessary that the patient present himself for examination if such early lesions as Dr. Bernard has mentioned are to be treated, and the best way to accomplish this is to stress the importance of routine health examination. Much has been done in calling attention of the laity to the necessity for such examination and much needs to be done in calling to the attention of the physician the necessity for complete examinations. One should not be satisfied with an examination of the heart, lungs, urine and blood pressure, and

especially in the case of women who have borne children, careful examination of the breast and of the cervix uteri are always indicated. Dr. Bernard has already mentioned an unfortunate example in the patient who prided himself on his negative urinalysis and normal blood pressure and yet without his knowledge had an inoperable malignancy of the rectum which was readily apparent by simple rectal examination.

A second point is that all causes of chronic irritation should be removed and the areas that have been subjected to the irritation or to repeated injury should be repaired. There is little that we know about the etiology of tumors, but this we do know, that sites subjected to chronic irritation or repeated injury are favored sites for the development of cancers. Dr. Bernard has already mentioned that cancer never begins in a healthy spot.

As a third point I suggest that a good working rule is that all tumors, when possible, should be removed. One should rarely make the distinction between benign and malignant tumors until they are outside the body. Just recently two tumors of the breast that were diagnosed preoperatively as benign fibro-adenomas proved to be carcinomas. Fortunately after radical operations metastases had not developed. Even in the lowly fibroid of the uterus areas are sometimes found that prove to be malignant. And it is hardly necessary to call attention to the fact that careful microscopic study is necessary to distinguish between a benign adenoma of the thyroid and an adenocarcinoma.

As a final point I wish to emphasize the necessity for cooperation between the surgeon and the pathologist. Many times in biopsies a simple diagnosis from the pathologist is not sufficient. To dismiss all sections of the cervix that are not malignant with a diagnosis of chronic inflammation is not just to the patient. Before cervical repair is undertaken in suspicious cases recourse is often had to a biopsy. A careful appraisal of the morbid changes that are present should determine the type of operation. Let me illustrate. A section of cervix is removed for study and the pathologist sees chronic inflammation with attempts at repair which now exceeds the normal limits. The epithelium is hyperplastic as well as anaplastic. There is no evidence of invasion so that a diagnosis of malignancy is not justified, yet it is essential that all of this unhealthy tissue be removed. In many cases the pathologist should act as a consultant and a verbal report is often better than a written one.

On the other hand in the presence of the earliest signs of malignancy the pathologist should be definite in his diagnosis. I recall one particular case in which a diagnosis was made in our laboratory of an early adenocarcinoma of the breast. The doctor who submitted the specimen requested that slides be sent to a prominent pathologist for confirmation. His diagnosis was to this effect: "An irregular hyperplasia of breast epithelium with a new growth of alveoli which is now beginning to invade the fat." This report was sent to Dr. Lamar who was then Professor of Pathology and his comment illustrates this particu-



lar point. He wrote back to the doctor as follows: "He sees the same thing that we see, but he hesitates to use a bad name."

DR. M. T. HARRISON (Atlanta): It seems that the essayist did not complete his dissertation in reference to the preventability of cancer of the cervix.

It is fairly generally recognized that cancer of the cervix is a preventable condition provided there is cooperation between the patient and the doctor. Those doctors who do gynecology and obstetrics have a great responsibility in the prevention of cancer. Cancer of the cervix occurs principally in women who have borne children and in so doing have, in the majority of instances, been under the care of a physician. This contact opens the door for a discussion of the possibilities and probabilities of cervical cancer and provides entree for its treatment or rather prevention. No other branch of medicine has such an opportunity. Therefore, a large responsibility for lessening the incidence of cancer is upon the physician attending the parturient mother.

The cautery is a popular method of taking care of cervical erosions. I should like to add, though, that in the repair of a cervix with the cautery be not satisfied with just taking care of the erosion. Quite frequently following cauterization the erosion will heal over but leave considerable scar tissue or you may have an inclusion cyst develop under the scar. It is well to have the patient return three months later and at that time do such additional cauterization as may be indicated.

DR. A. J. MOONEY (Statesboro): An able paper like this, in my opinion, should be amply discussed, since all the educational propaganda that has been going over the country, is very important.

Dr. Bernard's paper reminds me of what Dr. Murphy used to say about acute appendicitis. He said a paper on acute appendicitis should be read at every meeting of the medical association, because the mortality of it is too high. Just the same thing should apply to the early recognition and prevention of cancer, in my opinion, and I should be glad to see at every state meeting somebody take the time to make the investigation and go into the subject thoroughly as Dr. Bernard has.

The American College of Surgeons has gotten out some very interesting information. They quoted several thousand cases of five years cured, eight years cured, ten years cured, which is encouraging, still we have seen cases of fifteen years considered cured develop metastases.

As to early recognition since we have advised the people to come early, let us appreciate the responsibility that rests upon us. So well did Dr. Pund give the fact that every tumor should be looked upon with a great degree of suspicion, and that so few benign tumors are found. So frequently have we seen, after a passing of years, after the incomplete removal of a benign tumor, a carcinoma, a squamous cell epithelioma or maybe some other form of a malignancy develop.

## DYSINSULINISM\*

### *Report of Cases Treated Surgically*

J. C. PATTERSON, M. D.

W. G. ELLIOTT, M.D.

Cuthbert

It is with pardonable pride that we of the South recall that our friend and neighbor, a Southern physician, Dr. Seale Harris, of Birmingham, Alabama, first called attention to a new disease—dysinsulinism. Dysinsulinism is an abnormal increase or decrease in the secretion of insulin and is manifested by either an increase or decrease in the normal blood sugar findings.

Hypo-insulinism, or diabetes, was well known, but it remained for Dr. Seale Harris to be the first to report a case of hyperinsulinism. This report was in the Journal of The American Medical Association of September 5, 1924, and the patient was a doctor who had weak, fainting, nervous spells just before meals or when his stomach was empty. The blood sugar taken at the time the symptoms were present was found to be .065 mgms. The symptoms would clear up after eating. Dr. Harris compared the pancreas with the thyroid gland. The increase of thyroid extract, hyperthyroidism or toxic goitre being comparable to hyperinsulinism with its nervous manifestations and hypothyroidism or myxedema comparable to hypo-insulinism or diabetes. A combination of both hyperinsulinism and hypo-insulinism in one individual he called dysinsulinism.

There have been numerous cases reported both of hyperinsulinism and hypo-insulinism and quite a few cases of dysinsulinism. There are various degrees of this condition, from mild weak spells when hungry (this probably accounts for the great American habit of drinking soft drinks between meals) to weakness, nervousness and sometimes convulsions.

### *Report of Cases*

Milder types of the disease are frequently seen. The following cases illustrate the various stages of severity of the disease.

Case 1.—A 25-year old white man came into the

\*Read before the Third District Medical Society, Americus, June 20, 1934.

office complaining of fatigue and becoming weak and nervous between ten and eleven in the mornings and between five and six in the afternoons. He had also been troubled occasionally in the mornings before breakfast. His appetite had been good and his weight had been about the same. A general physical examination showed the patient to be underweight and extremely nervous. X-ray and blood examinations showed no abnormality and the basal metabolism was normal. He was treated for one year without satisfactory improvement and finally it was suspected that he might have hyperinsulinism. The blood sugar was found to be 84 mg. per 100 cc. He was given six feedings daily and his symptoms improved immediately. He has gained 12 pounds in weight and is apparently well at this time.

Case 2.—A white man 30 years of age came in for a life insurance examination. Sugar was found in his urine. He had not been troubled with polyuria, polydipsia or polyphagia. Between meals he had been troubled with attacks of weakness, nervousness and an empty feeling in his abdomen. These attacks had been becoming more severe over a period of two or three years. Sugar had been found in his urine two years before. On April 29, 1934 his urine was negative for sugar at eight in the morning while at three in the afternoon sugar was present in the urine. A fasting blood sugar on the same morning was found to contain 66.2-3 mg. of sugar per 100 cc. of blood. A general physical examination was negative. A glucose tolerance test was done and the fasting blood sugar was 66.6 mg. per 100 cc. of blood. Thirty minutes after the ingestion of glucose the blood sugar was 105.2 mg. per 100 cc. One hour after the glucose the blood sugar was 117.6 mg. per 100 cc., while two hours after the glucose it was 80 mg. and in three hours it was 74 mg. per 100 cc. A high fat, low carbohydrate diet was prescribed and extra feedings were given between the regular meals. The patient has been entirely relieved of his symptoms on this regimen of treatment.

Case 3.—This patient was a 45-year-old Negro woman whose chief complaint was attacks of nervousness and weakness when the stomach was empty. She had had several convulsions usually occurring in the mornings before breakfast or in the mid-morning or mid-afternoon. The patient had lost considerable weight and there was a severe pyorrhea alveolaris. There was a tender mass palpable in the epigastrium just above the umbilicus. This mass could not be felt all of the time. A roentgenogram showed a filling defect in the duodenum which seemed to be the result of outside pressure. Her blood sugar was 55.5 mg. per 100 cc. This patient apparently has severe hyperinsulinism which may be due to a pancreatic tumor. An operation has been advised.

Most of the cases of dysinsulinism that have been reported have had tumors of the pancreas. Some few had infections and some experimental cases were produced by infections or injuries to the pancreas.

The first pathological study of a case of hyperinsulinism was reported by Allen in 1927. The patient was a doctor who had faintness and weak nervous spells if his meals were delayed. An autopsy showed a carcinoma of the tail of the pancreas with metastatic nodules in the liver and these metastatic nodules produced insulin reactions when injected into rabbits.

Finney and Finney in 1925 first reported a successful resection of the pancreas for hyperinsulinism. There was some improvement but the patient was not entirely cured. Since then there have been quite a few cases reported where tumors were found in the pancreas and removed and other cases of resection with both good and bad results.

We have not seen any cases reported where there was a pancreatic infection from an infected gall bladder.

We wish to report the following two cases of dysinsulinism who apparently have been cured by the removal of chronically infected gallbladders:

Case 4.—A white, married 48-year-old farmer came in complaining of severe headaches, indigestion, nervous and weak spells. One brother had diabetes; the family history was otherwise negative. The patient has had malaria and gonorrhea. In 1929 he was operated on for appendicitis and the gallbladder was normal at that time. Since 1924 he has been having attacks of nervousness and weakness, at times feeling like he was about to faint. These attacks were infrequent at first, but have become much more frequent in the past year. At times he has been troubled with indigestion but has not had any severe attacks of abdominal colic. The attacks have occurred most frequently several hours after eating or after exercise. Because of these attacks of weakness the patient had to quit his work and has not worked in several years. During this time he lost considerable weight and became despondent over his condition.

When the patient came into the office for examination sugar was found in the urine. He gave no history of the usual symptoms of diabetes. A complete examination including x-ray studies and blood sugar determinations was begun. During this examination while staying at a relative's home he had a severe headache, abdominal pain and extreme nervousness. He became very weak and felt like he was losing consciousness. He was sent into the hospital and the blood sugar was found to be 60 mg. per 100 cc. of blood after adrenalin had been given to revive him. The physical examination was essentially negative except for tenderness on deep palpation over the right upper quadrant. A diagnosis of dysinsulinism was made and an exploratory laparotomy was advised. It



was explained to the patient that he had a diseased gallbladder and probably a tumor of the pancreas. Operation was refused and a plan of medical treatment including frequent feedings was advised. This was followed and the patient gained weight but continued to have the attacks of weakness. He returned in two weeks for the operation.

A laparotomy was done and the gallbladder wall was thickened and it was densely adherent to the surrounding structures. The pancreas was larger than normal and was harder to touch than normal. The gallbladder was removed and a cigarette drain was inserted through a stab wound. The convalescence was uneventful. The blood sugar two weeks after operation was 100 mg. per 100 cc. of blood. He has gained 15 pounds in weight and has returned to his work.

Case 5.—A 36-year-old white, married man came into our office complaining of weakness and nervousness in the mornings and recurrent attacks of pain in the right upper abdominal quadrant. This trouble began in April of 1933 and since then he has lost thirty pounds in weight. During the past several months the attacks had occurred several times each week. Recently he had several attacks in the morning between breakfast and dinner. These attacks are relieved somewhat by eating. The blood pressure was 90/70 and there was tenderness on deep pressure in the right hypochondriac region. The urine and blood examinations showed normal findings. X-ray studies of the gastro-intestinal tract were negative. An analysis of the stomach contents showed a free hydrochloric acid of 36 degrees and a total acidity of 58 degrees. A roentgenogram of the gallbladder after administration of the dye showed an abnormal appearance of the gallbladder and a delayed emptying time. The blood sugar was 90 mg. per 100 cc. of blood. No blood sugar determinations were made during one of the weak spells.

A diagnosis of chronic cholecystitis was made and the patient was operated on. The gallbladder wall was thickened and was surrounded by adhesions. The head of the pancreas was enlarged and hardened. Convalescence was uneventful and the patient has recovered and returned to his work. While a low blood sugar was not obtained in this second case the symptoms were typical of the condition and we believe a blood sugar obtained during one of the attacks would have been low.

Deaver and several others state that the pancreas is secondarily infected from a chronically infected gallbladder by way of the lymphatics. However, Archibald of Montreal denies this. He believes, and numerous experiments show, that the pancreas is infected from a diseased gallbladder by regurgitation of infected bile into the duct of Wirsung. He also showed by experiment that bile deprived of its mucin is very irritating to the pancreas. He also showed that

in gallbladder disease the mucin secreted by the gallbladder does not mix with the liver bile and that under these circumstances a pancreatitis may result. Others claim that the infection is carried from the gallbladder to the pancreas through the blood stream. By whatever method it takes place it seems to be a fact that the pancreas is often infected from a chronically infected gallbladder. In the two cases reported in this paper the pancreas was infected from an infected gallbladder and the dysfunction of the pancreas was relieved as a result of removing the gallbladder.

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#### TRANSURETHRAL RESECTION OF THE PROSTATE: IMPROVED INSTRUMENTS AND OPERATIVE INDICATIONS

Hugh H. Young, Baltimore (*Journal A. M. A.*, June 9, 1934), discusses the various operative procedures for transurethral surgery for the obstructing prostate and in pointing out the advantages of the perineal route he does not wish to condemn transurethral surgery; as a matter of fact, it is employed in his clinic with great frequency, and there are many cases in which it is distinctly preferable to prostatectomy. Both the electric and the plain cutting instruments are used. With the introduction of improved instruments, the tube for injections of procaine hydrochloride, the rotating, angulated spear to secure larger excised masses, and the accurate fulguration of all bleeding points, much progress has been made. The advantages of the punch operation, with the spear technic, are briefly as follows: the simple convalescence, due to absence of slough, the comparative avoidance of infection and secondary hemorrhage, the quicker healing, and the greater freedom from suppuration and pain. The author states that in the more advanced cases of prostatic hypertrophy his punch, even with the spear, is not satisfactory. For such cases perineal prostatectomy is greatly to be preferred to any transurethral operation, even though it is possible to remove much tissue by the punch and by electroresection. The clean enucleation of hypertrophied lobes through the perineum is certainly more permanently curable and is accompanied by less suppuration and grave complications than after electroresection. Prostatic surgery has now arrived at a point where it is one of the safest major operations. By means of transurethral surgery and accurate visual perineal prostatectomy, the high mortality of the past should be completely eliminated and many more cases of carcinoma recognized early and cured.

## NASAL ACCESSORY SINUSES AS FOCI OF INFECTION\*

### *Report of Cases*

\* LOUIS C. ROUGLIN, M.D.

*Atlanta*

Autogenous infection producing many body ailments is an accepted fact both by the laity and profession. For many years diseased teeth and tonsils have been recognized to have an important role as areas of focal infection, but the sinuses and importance of the extensive labyrinth and sinuses accessory to the nasal cavities, have not been fully appreciated by the laity and but a very small part of our profession. In fact, there has even been a tendency on the part of the profession to disparage the rhinologist and his work. This, in the past, was largely due to the anatomic and mechanical difficulties which stood in the way of a complete investigation of these structures.

With improved methods notably the anroscope, improved x-ray technic and interpretation, the introduction of radio-opaque substances, such as lipiodol, we may now discover pathologic changes in these cavities, previously overlooked, and equally well determine, with a fair degree of accuracy, the absence of disease, and we have been able to demonstrate in persons suffering from a general systemic disorder the presence of cause and effect, by noting an improvement or cure in the general condition, following or keeping pace with the improvement or cure of the sinus disease. The deleterious influence of accessory sinus disease on general systemic disturbance has been proven by many competent observers and investigators in this country.

More fully to visualize this area, I crave your indulgence while I will briefly refer and illustrate the anatomy of these parts. You are of course all aware that the nasal cavity is divided into two, more or less equal halves by the septum, and that on each lateral wall there are three turbinates each with its corresponding meatus. Of the sinuses, in my

opinion, the most important are the maxillary antra. Its ostium is situated in the middle meatus beneath the middle turbinate adjacent to the nasofrontal canal, and ostia of the anterior ethmoidal cells. The opening of the posterior ethmoidal cells is above and behind the middle turbinate, and the sphenoid behind the posterior part of the middle turbinate.

The blood supply is derived from both the internal and external carotid arteries. The important features of the venous circulation are its connection with the intra-cranial nerves, sinuses and vessels and the possibility of cavernous sinus infection from intranasal and sinus origin, as well as from superficial infections about the region of the nose.

The lymphatics also communicate with the subdural spaces by means of lymphatics surrounding the olfactory nerves, and with the deep cervical glands by means of the lymphatics of the pharynx.

Apart from the olfactory nerves, the nerve supply is from the fifth nerve. Of special importance is the sphenopalatine ganglion consisting of an interlacement of nerve fibres in which are numerous sympathetic neurones. There is a sensory root, (the sphenopalatine nerve from the maxillary) the fiber being mostly dendrites of the gasserian ganglion. The motor root is from the facial nerve, the sympathetic from the carotid plexus. The two fused form the vidian nerve joining the ganglion in the sphenomaxillary fossa. From the ganglion various branches are supplied to the nasal and accessory sinus mucosa, and to the mucosa of the tonsils as well as to the palate and its muscles.

The lining is a ciliated mucous membrane continuously lining the nasal and accessory sinus cavities.

For clinical study, sinus diseases may be classified as:

1. Acute.
2. Chronic purulent with frank pus in the sinuses with little or no thickening of the mucous membrane.
3. Chronic hyperplastic with or without polyps and a very sticky secretion often scanty in amount.
4. Mucocoele.

\*Read before the Fifth District Medical Society, Atlanta, March 22, 1934.



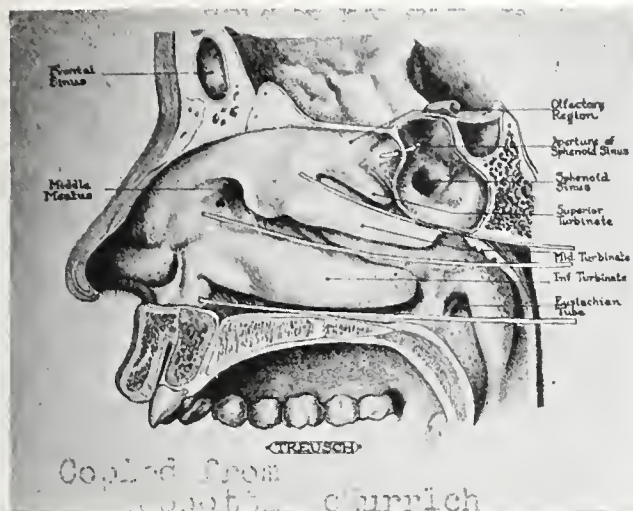


Figure 1

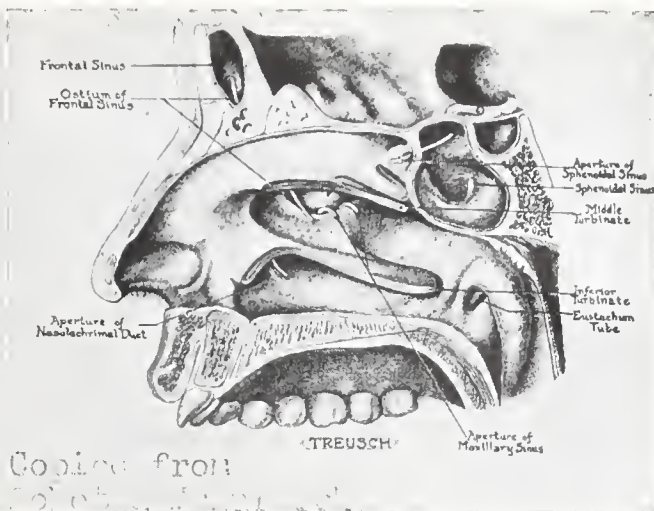


Figure 2

For the purpose of this paper, only Nos. 2 and 3 are of general importance. The method by which secondary infections take place are (1) Blood borne secondary foci of infection produced by nasal sinusitis resulting from pus leaving the sinuses through the natural orifices, descending by gravity or aspiration over the structures of the respiratory tract infecting these structures by contact and thence fed by them into the circulation.

(2) Absorption and dissemination directly from the sinus mucosa.

(3) By direct extension due to an abnormally thinned sinus wall, dehiscence, or by a traumatic break in a normal sinus wall.

The following conditions may often be found due to sinus infections, in order of their frequency and importance.

*Lungs*—Asthma, bronchiectasis, bronchitis.

*Heart*—Myocarditis, endocarditis and pericarditis.

*Kidney*—Pyelitis, nephritis.

*General*—Arthritis, digestive disturbance, dermatoses, neuritis, especially optic neuritis. Intracranial diseases such as brain abscess, meningitis, cavernous sinus diseases, are usually traceable to primary infections in the nasal sinuses.

*Children*—In children a persistent nasal discharge especially after tonsillectomy and adenectomy have been performed is often due to sinus infection and is a causative factor in chronic bronchitis, asthma and bronchiectasis.

Due to the limitation in time, I have se-

lected only a few of my personal cases to illustrate some of the conditions which were undoubtedly secondary to nasal sinus infections.

#### Report of Cases

Case 1.—J. J., aged 7 1-2 years, was first seen by me on Feb. 10, 1927. She had her tonsils and adenoids removed in Aug. 1925. Four months later, she had an attack of "flu" and was sick for one week. This was followed by a mild asthmatic condition, which was then relieved with general treatment by her physician. Six weeks later she had an attack of bronchitis followed by asthma. She has been under constant care and treatment since that time, but has never been entirely free from either bronchitis or asthma. Examination of her sinuses revealed bilateral infection of her anterior ethmoids and antra. She was treated locally by posture, suction and instillation of antiseptic astringents. She made immediate improvement and was completely cured in about ten weeks. She has been entirely free from bronchitis or asthma since that time.

Case 2.—Mr. W. T. S., aged 47, first seen Feb. 3, 1925, had neuralgic pains over left side of face about two years ago and had four teeth pulled which gave him relief for several months. When the pain returned and his left antrum was irrigated, it resulted in some improvement but he has not been entirely well. At present he complains of feeling generally below par, is mentally depressed and unable to properly attend to his business. For the last month, he has been more or less confined to bed with bronchitis and general malaise. He thinks he has tuberculosis, and fears he will never recover. Radiograph reveals distinct clouding of left ethmoids and antrum, nasal septum markedly deviated to right side, obstructing left nasal fossa. Other sinuses are clear. Submucous resection of septum and window resection of left antrum and under guidance by antrascopes all apparent pathologic mucosa was removed by curette. Patient made a rapid recovery and has been free from symptoms since 1925.

Case 3.—Miss L. S., aged 27, was first seen April

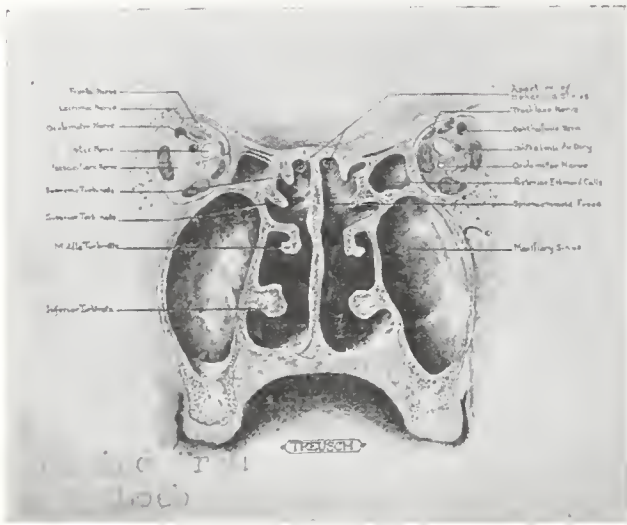


Figure 3

3, 1932. She had her tonsils and adenoids removed at age of 10. She complains of frequent colds, loss of weight, defective respiration, headaches, general malaise and occasional night sweats. Mother died of pulmonary tuberculosis. One sister now in Battle Hill Sanatorium under treatment for tuberculosis. Radiograph shows chronic hyperplastic sinusitis of right side. Submucous resection of septum, irrigation of antrum and exenteration of ethmoid cells around the ostium was followed by rapid improvement, gain in weight and strength, and patient returned to work.

Case 4.—J. C., age 5 years 8 months, is underweight, anemic, has considerable nasal discharge and post nasal drainage, and suffers with constant cold. Adenoids and tonsils were removed about a year ago, with no marked improvement. Examination revealed general congestion of nasal mucosa with cloudiness of left antrum, the usual treatment of shrinkage with suction and tamponage did not afford any marked relief. Irrigation of the antrum combined with general care by the pediatrician resulted in rapid progress and ultimate cure.

Case 5.—Mr. S. J. P., aged 24, was first seen Jan. 26, 1933. He had an extraction of a right molar about three months ago and has more or less neuralgic pains over right side of face and ear since then. The pain in his ear at times is so severe as to interfere with his sleep. He feels generally below par, complains of loss of appetite, disagreeable taste and smell from mouth, and is not up to his usual standard in his work as a motor tester at the airport. Radiograph shows opacity of right antrum. Puncture revealed large amount of foul smelling pus. He was treated by irrigation and made a complete recovery.

The method of treatment varies with age, general as well as local conditions in each individual case. In many cases simple production of proper ventilation and drainage of the sinuses will prove of marked benefit on the mucous membranes on the bronchi and on the bronchioles, especially on chronic bronchitis. In children, for diagnostic pur-

poses, lavage is more to be depended upon than the x-ray. This can usually be accomplished under local anesthesia, or when that is not practical, under gas anesthesia. The puncture should be made in the middle meatus, just above the inferior turbinate and the trochar should be directed upward towards the center of the lower orbital margin and not to the outer canthus of the eye as in adults. This precaution is important as in children the floor of the antrum is situated much higher and the cavity is more shallow. In other cases, window resection with complete exenteration of the ethmoids or a complete radical operation is imperative for successful results. In all cases, the general health of the patient, regulation of diet and when necessary drugs as prescribed by the internist or pediatrician are essential and must be carried out in conjunction with the treatment by the rhinologist.

In properly selected cases, failure to secure good results can be attributed to (1) Failure of cooperation with the internist or pediatrician to help build up general vitality and resistance of the patient. (2) Failure to secure sufficient ventilation and drainage and (3) Insufficient removal of diseased cells and mucosa.

Experience and observation have proven that usually asthma and bronchial conditions respond well and that favorable results may be expected in cardiac conditions, arthritis and allied diseases.

Patience and study in this field of medicine together with close cooperation with the pediatrician, internist, as well as the general surgeon, are essential and most desirable from the standpoint of the physician and for the utmost benefit to the patient.

*Discussion on Paper by Dr. Rouglin*

DR. WILLIAM C. WARREN, JR. (Atlanta): The literature dealing with the sinuses is markedly voluminous, about 150-200 articles being published yearly. This signifies present interest in the subject and reflects the tremendous effort being made by rhinologists throughout the world to extend knowledge and to develop more certain control of this problem.

Under improved methods employed to diagnose sinus disease may be added laboratory studies, cytologic examination, a Von Schilling blood count tells us much. Any number of cases require blood chemistry, calcium



calculation, and a basal metabolism. Systemic disease, associated with chronic infection of the sinuses, can cause a leukopenia, lymphocytosis, and diminished polymorphonuclear cells in about forty per cent of the cases; therefore, we feel that chronic disease of the sinuses is a definite factor in the production of systemic disease, and is often an unsuspected focus of infection and often coexists with infected tonsils and teeth.

The order of frequency in which the sinuses are involved is ethmoid, antrum, frontal and sphenoid. In the majority of acute coryzas the anterior cells of the ethmoid are involved to some extent and for this reason it heads the list in frequency.

Etiological factors in sinus disease: (a) whatever interferes with ventilation and drainage of the nose (b) swimming and diving (c) diet and allergy (d) acute colds and influenza (e) acute exanthemata (f) teeth (g) calcium deficiency (h) metabolic disturbances (i) changes in blood chemistry.

The important methods by which secondary infections take place are: 1. Absorption of toxins or allergic products. 2. Direct extension to the pharyngeal lymphoid tissue which, in turn, becomes a focus for other diseases. 3. Direct aspiration into the lungs which has been proven to occur with apparent ease. This is the most probably explanatory factor for the frequent association of bronchiectases, bronchitis, and sinusitis. This latter condition is found more frequently in children than adults and may cause grave concern on the part of parents unless recognized early by the family doctor or pediatrician. Convalescence is unduly prolonged unless the proper attention is given to the sinus infection. I have known any number of these cases being diagnosed as tuberculosis.

In Dr. Roughlin's case reports, I wish to call attention to Case 1, a patient seven and one-half years of age, who had had intermittent attacks of upper respiratory infection over a period of six months. After receiving proper attention, she has been entirely well since. It is just such a case as this, if allowed to continue and not referred to a competent otorhinolaryngologist, that develops numerous upper respiratory infections in adult life.

In his second case, one of a man age forty-seven, the neuralgic pains in the left side of his face with the etiological factor being dental in origin. When the involved teeth were extracted, he obtained relief for several months. This condition is quite common and offers the general surgeon and otorhinolaryngologist quite a problem at times. It is generally believed that the antrum infection follows the extraction of a tooth, or teeth, and is not present before hand. We say this because the patient doesn't have any symptoms, whatsoever, until after the dental work has been done. Nevertheless, the teeth are the etiological factor and cause ten per cent of all infected antra. Consequently, full cooperation on the part of the dental surgeon and the ear, nose and throat specialist is imperative.

It has been my pleasure in the past month to see a case of acute sinusitis in a diabetic. This patient had

not been under the care of an internist for the past eight years; being able to control her diabetes by the use of Insulin. The sinus infection produced such a severe toxemia that she began to have pernicious nausea and vomiting, showing all signs and symptoms of beginning acidosis. She was sent to the hospital and her blood sugar was found to be 425 milligrams. Her sinus condition was treated vigorously with shrinkage and suction and when this began to improve, the diabetic condition responded more readily to treatment.

The method of treatment as outlined by Dr. Roughlin is quite complete. I only wish to emphasize this sentence, "In many cases simple production of proper ventilation and drainage of the sinuses will prove of marked benefit." Provided that the patient is seen soon enough. The least you have to do to the mucous membrane with its ciliated epithelium the better for the patient. After a sinus infection becomes chronic, the prognosis is always questionable and the best and most complete operations have been very unsuccessful in the majority of cases. Of course they produce some relief, but the results are not what we wish and hope for.

Sinus disease is not as incurable and dreadful as has been pictured to the laity, and I am sure that with more cooperation on the part of the internist and pediatrician we will be able to assist these patients more than ever before, and fewer of them will develop a chronic infection.

#### SIMPLIFYING THE PROBLEM OF INFANTILE ECZEMA

An effort is made in this paper to bring out the more common causes of infantile eczema and thus simplify the study of this baffling problem of infancy and early childhood.

Most allergist concede the importance of heredity as shown by the presence in the family history of such symptoms of allergy as asthma, or hay fever, or eczema. Hill doubts the value of a positive family history in establishing a diagnosis of true allergy.

A statistical study shows that many skin diseases of children are commonly confused with eczema such as seborrheic dermatitis, impetigo contagiosa, napkin dermatitis, and scabies.

An analysis of 157 cases shows the most common causes to be milk, eggs, and cereals, in their order of frequency. These three foods accounted for eighty per cent of the series. Other foods entering into the etiology of the cases studied were oranges, tomatoes, and potatoes. Emphasis is made of the fact that sensitization is much more frequently multiple than single, thereby explaining the difficulties encountered in diet elimination tests.

Treatment consisted simply in removing the guilty foods from the diet of the child. Desensitization is taken care of by nature so that, after a period of several months, full diet can gradually be resumed.

Abstract of an article in *The J. of Ped.* 4:4 494 (April), 1934.  
Lee Bivings, M.D., Atlanta.

## AN UNUSUAL SERIES OF COMPLICATIONS FOLLOWING MEASLES\*

### Case Report

W. C. BOSWELL, M.D.

E. B. SAYE, M.D.

Macon

Baby J., female, age twenty months was admitted to the Pediatric Wards of the Macon City Hospital on January 27, 1934.

**History**—Four weeks prior to admission the child contracted measles and during the course of the eruptive stage, despite fever and rash was not kept in bed and was out of doors part of the time. Cough which began with the onset of measles persisted and became more severe until admission. The child's appetite was very poor for three weeks prior to admission. Due to the fact that fever persisted and the cough increased in severity a physician was called and two or three days later the child was admitted to the hospital.

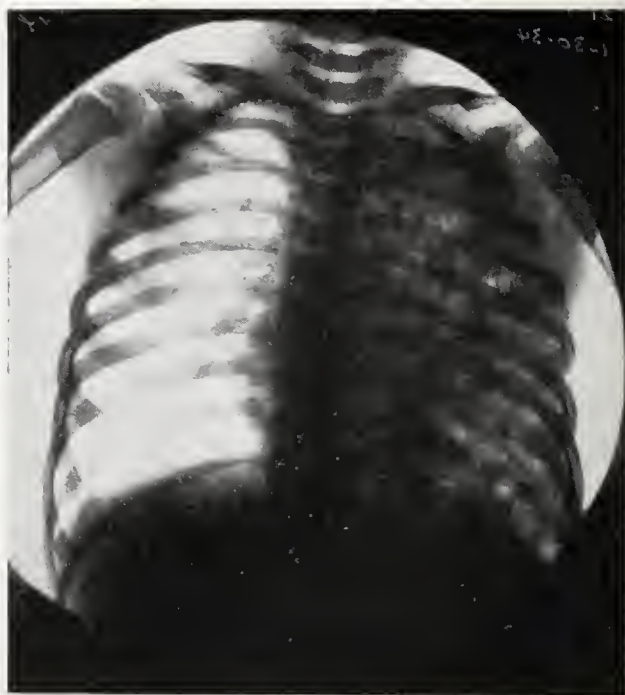
**Physical Examination**—The essential findings were as follows: The skin was dry and hot. Respirations were rapid and shallow. There was marked pallor of the skin and mucous membranes. There was a subcutaneous emphysema involving the region of the apex of the left lung, the suprasternal area and both sides of the neck. Generalized rales of all types were heard over the entire left chest anteriorly and posteriorly.

A roentgenogram made after admission showed increased density in the left lung with mottling throughout and subcutaneous emphysema of the tissues of the neck. The impression from this plate was that of diffuse bronchiectasis.

The white blood count was 18,800. The differential count was polymorphonuclear leucocytes 48 per cent, small lymphocytes 42 per cent, and large lymphocytes 10 per cent. Hemoglobin estimation was 65 per cent (Tallquist).

**Course in hospital**—The child was acutely ill at all times with temperature varying from 100 to 104 degrees (rectal) and with much respiratory distress. Treatment was symptomatic and consisted of forced fluids, hydrotherapy and stimulants. About twenty-four hours before death the child began to expectorate large quantities of muco-purulent material with a putrid odor. Postural drainage was considered and one attempt made for a few moments but the child's condition would not permit it. Death occurred Jan. 29, 1934. An autopsy was performed the following day by Dr. Saye nine and one-half hours post mortem showed the following findings:

**External appearance**—The body is that of a pale but well-developed baby. The body length is about 30 inches. **Thorax**—The right lung and pleural cavity were normal except for slight hypostatic congestion and possibly slight hypostatic pneumonia in the right apical region. The left lung was adherent by recent slender adhesions to the parietal pleura especially in



the region of the sternum. There was no free fluid in the cavity. Externally the left lung was mottled, the hyperemic surface alternating with several yellowish areas which on cutting through were found to be superficial abscesses. The tissue was friable so that it was difficult to handle it without causing some of the thin superficial walls of the abscesses to rupture. On the inner surface of the base of the left lung there was seen a necrotic area that may have ruptured antemortem into the mediastinal tissues in the region of the fascial coverings of the great vessels. On section of the lungs the bronchi of both lobes all appeared necrotic and dilated to form bronchiectatic sacs. These were all filled with pus of the character already described. The intervening lung tissue of both lobes was rather firm. The appearance then was that of multiple saccular dilations of bronchioles and bronchi with necrosis of their walls and with supperation in all of them. In addition there were abscesses that were not directly connected with such saccular dilations.

The diagnosis was multiple abscesses of left lung. (2) Multiple bronchiectatic sacculations in left upper and lower lobes. (3) Slight subcutaneous emphysema of neck.

Stained films of the pus showed Vincent's spirilla and fusiform bacilli in great abundance.

### MENSTRUAL EDEMA: PRELIMINARY REPORT

J. Shirley Sweeney, Dallas, Texas, (Journal A. M. A., July 28, 1934), records the weight of forty-two normal, healthy young women before, during and after menstruation. Approximately 30 per cent of these women showed a gain of 3 or more pounds sometime during the menstrual cycle, usually just before the period was established. Other cases showed a true pitting edema. This phenomenon may be due to some endocrine disorder or disturbance of the sympathetic nervous system rather than to changes in the blood constituents or to renal insufficiency.

\*From the Pediatric Service Macon Hospital, Macon, Ga.



## PAROXYSMAL TACHYCARDIA\*

CHAS. C. HINTON, M.D.

*Macon**Definition*

Paroxysmal tachycardia has been defined by Sir Thomas Lewis as "a condition in which from time to time the normal mechanism of the heart beat is interrupted by a series of rapid and regular beats varying between 100 and 200 beats per minute, the attacks beginning and ending abruptly." He gives the average acceleration as about 160. Willius groups a wider set of phenomena under the heading of paroxysmal acceleration of the heart rate, under which are included paroxysmal auricular tachycardia, paroxysmal auricular flutter, paroxysmal auricular fibrillation, paroxysmal nodal auriculo-ventricular) tachycardia and paroxysmal ventricular tachycardia<sup>1</sup>. In this larger grouping, rates considerably in excess of 200 are found, even above 300. The differentiation of these conditions depends, for the most part, on electrocardiography and is not even always possible by that means.

*Etiology*

There are three centers of independent rhythmicity in the heart, the sinus node, the auriculoventricular node and a center in the ventricular musculature. The sinus node acts as the pacemaker for normal rhythm as its rate is faster than that of the other two centers.

In paroxysmal tachycardia a new center of control arises in the auricle, in the vicinity of the auriculoventricular node or in the ventricle. There is some difference of opinion among cardiologists as to whether this is a single point or a circus movement<sup>2 3</sup>. The cause of the heightened excitability of the center is not known but it is generally agreed that patients with paroxysmal auricular tachycardia rarely have myocardial damage and that with few exceptions, those of ventricular origin do show organic pathology in the form of acute or chronic myocardi-

tis<sup>2 4 5 6 7 8 9</sup> or coronary disease<sup>7 10</sup>. Forty or more cases have been reported by pediatricians and the conclusion has been drawn that myocardial damage is always present<sup>11 12</sup>. Many of these are cases of auricular flutter. Some of the younger patients were aged 4 days, 21 days, 3 months, and 20 months.

Although the essential etiology is not clear there is no lack of information of precipitating causes of the individual attacks. Emotion and exertion are about equally blamed<sup>3 8 13</sup>. Indigestion is apparently the cause at times and it is perhaps unusual that it is not more frequently blamed as vomiting is often accompanied by relief. Paroxysmal ventricular tachycardia is at times precipitated by the use of digitalis intoxication<sup>7</sup>. The deciding point in the individual case is apparently the state of nutrition of the myocardium. Heyl reports an incidence of the auricular type in a patient with a decompensated heart from the use of digitalis<sup>9</sup>. The use of atropin has resulted in attacks at times<sup>8</sup>, and in this connection it is interesting to note the report of a case by Graber in which autopsy showed that the vagi were degenerated due to pressure of Hodgkins' masses in the mediastinum<sup>14</sup>.

Nicotine has been thought to cause the tachycardia<sup>7</sup>. Among chemicals, epinephrine is more likely to induce a paroxysm than anything else<sup>3 8</sup>. Otto and Gold had an unusual opportunity to study a patient in whom attacks could be produced at will by epinephrine. The case was one of auricular paroxysmal tachycardia and they found that, in the absence of interference, epinephrine never failed; that quinine intravenously failed to abolish spontaneous or induced attacks; that quinidine by mouth would prevent both spontaneous and induced attacks; that atropine accelerated the heart but it prevented the induction of attacks by epinephrine; digitalization did not induce attacks, nor prevent induction.

The deduction was drawn that in this patient indirect vagus stimulation was necessary for the production of a paroxysm and that the mechanism was probably a circus movement whose entry could not be effected except by a shortening of the refractory period. A case of interest, particularly to the

\*Read before the Macon Medical Society of Bibb County, Macon, Feb. 20, 1934.

NOTE: Subsequent to the presentation of this paper I have treated two patients with paroxysmal tachycardia successfully with acetyl-B-methylcholin.

gynecologists, one in which the attacks were mechanically precipitated by the injection of air through the fallopian tubes<sup>15</sup>. If the patient assumed the vertical position the tachycardia occurred but lying down stopped the attack. Kern urges the use of carbon dioxide for injection into the tubes as it is more rapidly absorbed than air.

### *Symptoms*

The more usual symptoms and signs of paroxysmal tachycardia are quite familiar. The onset and termination of an attack are abrupt. There may be no symptoms except a sense of fluttering in the cardiac area and no signs except the rapid heart action and pulsation of the veins of the neck, if the myocardium is sound, unless the attack is so prolonged that the heart becomes exhausted. The pulse rate does not change with exertion. The patient's color is usually good. Respiration may be slightly accelerated but by no means in proportion to the expectancy from the tachycardia. The attack may last from a few seconds to several weeks, usually a few hours. The condition is more frequent in males than females and most often makes its appearance in young adults but it has been noted from the fourth day of life to the ninth decade.

Levine has called attention to the possible differentiation of auricular and ventricular paroxysmal tachycardias at the bedside without the electrocardiograph<sup>6</sup>. The ventricular type is not absolutely regular but has slight differences in the rhythm and a changing quality of the first sound at the apex. It is totally uninfluenced by vagal stimulation.

It is to the more unusual manifestations that attention needs to be drawn lest they be attributed to something else. Barnes and Willius report that 19 of 380 patients with paroxysmal tachycardia had pain of anginal character except that it was not precipitated by exertion, was longer in duration and was relieved by relief of the tachycardia and not by the nitrites<sup>16</sup>. In some of their patients there was a fall in the blood pressure and they advance the theory that the pain occurs when the oxygen supply to the heart muscle is reduced too much. This is in line with

the work of Kiefer and Resnik in angina pectoris.

Bassoe quotes a case report in which anginal pain occurred with the tachycardia and both were relieved by amyl nitrite<sup>17</sup>. I have used nitroglycerine in what I considered angina pectoris with a simple tachycardia of 140 with relief of both pain and tachycardia and I have used it in a case of paroxysmal tachycardia without pain but with an elevation of blood pressure from 150/85 to 180/100. The blood pressure dropped to the former figure but the heart rate showed no change from 186 per minute. The blood pressure slowly rose again but dropped the 150/85 when the paroxysm was ended.

In the paper referred to, Bassoe emphasized the interchangeability of migraine or epilepsy and paroxysmal tachycardia. Several cases are recorded in which it seemed quite definite that the three conditions had a close functional etiologic relationship. This interesting connection is presented as a substitution of equivalents and is different from the cerebral manifestations which may occur during an attack, possibly from disturbances of cerebral circulation. According to Barnes 15 of 104 cases studied showed such symptoms. These symptoms consisted of vertigo, hemianopsia, temporary blindness, fainting, falling with or without loss of consciousness and epileptiform seizures. In the last mentioned condition there was no aura or post-epileptic headache or drowsiness. The cerebral symptoms occurred in the patients who showed the greatest deviation from normal in their electrocardiograms, and were prevented when the paroxysms of tachycardia were controlled.

Moersch adds to the symptoms enumerated, paraesthesias of the lips, hands, feet and aphasia, and warns us that paroxysmal attacks of mental disorders demand the consideration of paroxysmal tachycardia as the possible underlying condition. In still another specialty interest in the condition must be aroused. Although only seven cases have been reported in connection with obstetrics the possible importance can easily be seen.

### *Prognosis*

In reviewing the literature, differences of opinion are met with as to the scope of the



clinical condition, the mechanism of its production, the frequency of the different types, the symptomatology, and the treatment, but on the subject of prognosis there seems to be unanimity. It depends on the condition of the myocardium. The only other factor of note is the duration of the attack. This statement, of course, applies only in the presence of an attack as it is obvious that if attacks can be prevented the attendant danger is likewise eliminated.

### *Treatment*

Attempts at treatment have been quite varied. Healey lists among the remedies tried, digitalis, strophanthus, quinidine, physostigmine, pilocarpine, choline, epinephrine, atropine, thyroid extract, calcium gluconate and ends by recommending that the urine be maintained in strong acidity by diet and aspirin as one of the most effective measures of preventing attacks<sup>20</sup>. A few drugs might be added to Healey's list such as quinine, ouabain, bromides, apomorphine, and acetyl-B-methylcholin.

Opinion is practically unanimous that carotid pressure should first be performed. The expectancy of success is given all the way from practically 100 per cent to very low figures. It has been demonstrated that this works through a carotid-sinus reflex and not by direct vagal stimulation. However, procedures such as deep breathing, swallowing cold or hot drinks and possibly vomiting are successful at times probably through their vagus irritation.

Returning to the question of drugs, Otto and Gold have called attention to the fact that a drug may be able to prevent paroxysms without being able to check them<sup>3</sup>. Quinidine is by far the most prominent candidate in this class both in auricular and ventricular types<sup>3 8 10 21</sup>. Gilchrist alone warns that it should not be used in advanced cardiac failure<sup>7</sup>. Although it is of especial value in preventing attacks it is used by some in attempting to stop them. I have one patient in whose case it has appeared to succeed twice.

Digitalis appears to be almost useless as a preventative and has been known to cause attacks in advanced myocardial degeneration. It certainly should be avoided if recent cor-

onary occlusion has occurred. However, it has been used intravenously with success in ending attacks, first slowing and then abruptly cutting short the attack in several supraventricular cases<sup>22</sup>. One of the most interesting drug discoveries is acetyl-B-methylcholin which seems to be a true parasympathetic stimulant. Its administration causes a slow pulse, flushing, heavy breathing, and salivation. Starr reports observations in nine cases of auricular paroxysmal tachycardia<sup>23</sup>.

Twenty attacks were stopped by carotid pressure alone. Twenty-four attacks were stopped by the drug alone and a few attacks required the drug in addition to the pressure. The effect was almost instantaneous but it could be quickly abolished by atropine. This is worth noting as asthma may be produced in susceptible individuals. The hypodermic dose is twenty to fifty milligrams while the dose is one gram. It is inferior to quinidine as a preventive.

Recently I have seen a patient who said she had "tried everything" for stopping the attacks without success until she was given apomorphine in 1/80 gr. doses. I treated her during two attacks but gave 1/30 gr. dose. Nausea followed within two minutes and the attacks ended abruptly within five more minutes. She informed me that vomiting did not seem sufficient unless accompanied by wrenching. I believe her attacks were very likely precipitated by digestive disturbance for in both attacks the stomach contained considerable food eight hours after her last meal.

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## AGRANULOCYTIC ANGINA

*Report of a Case Occurring in an Infant*

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Columbus

In 1922, Schultz described a symptom complex, which he termed agranulocytic angina. This condition was characterized by ulcerations of the buccal and pharyngeal mucosa. Associated with this, there were fever and prostration, much more severe than could be accounted for by the local lesions. At the same time study of the blood, revealed a marked leukopenia, with a considerable diminution in the number of the granulocytes.

Since that time, agranulocytic angina has been rather extensively studied, along with other conditions that have a similar blood picture. Collectively, they have been grouped together as the "Neutropenic State". At the present time, this term will include all the conditions in which there is a marked decrease in the neutrophils, without any reference to the etiologic factor. Many names are frequently encountered in the literature, describing the neutropenia, such as agranulocytosis, malignant neutropenia, granulocytopenia, and granulopenia. The term agranulocytosis has been reserved for an entity, in which there occurs a severe infection of the body areas normally inhabited by bacteria, together with the characteristic blood findings. Agranulocytic angina is more specific, and in this case, the infection must occur in the mouth and throat.

The etiologic factor producing the agranulocytic state is at the present time unknown. Apparently it is due to some toxic agent that depresses the myeloid tissue with the subsequent disappearance of the granulocytes. Roberts and Kracke believe the granulocytes disappear before the onset of the clinical symptoms of agranulocytic angina. The fulminating character of the disease is due to the lack of defensive powers by the host, since the polymorphonuclear leukocytes furnish the main defense mechanism of the body in cases of infection.

A large proportion of the cases described in the literature as agranulocytic angina, have occurred in middle-aged individuals, chiefly in women. The incidence of the disease decreases rapidly with the age, and in children, the condition is infrequent. Reviewing the literature, the author has not found a case reported at an earlier age than four years. As the case described here occurred in a child of eighteen months, and because of the extreme rarity of the condition at this age of life, a brief note was deemed of sufficient importance to include in the literature.

*Case Report*

A white baby aged 18 months was admitted to the hospital on Feb. 6, 1933, with the complaints of draining ears and a cold. The onset of the present illness had been three weeks before admission, when she developed a severe cold and high fever. The temperature was of the septic type, ranging from 101 to 104 degrees. Both ears commenced discharging on the day of admission.

The weight at birth was 4½ pounds. Development was normal. The patient had measles and whooping cough at the age of one year. Since that time, she had suffered from occasional colds. At the time of admission, patient still nursed the breast, although she had been eating from the regular table fare.

On admission the temperature was 103.2 degrees, the pulse was 140, and the respirations were 27. The patient was fretful and apparently uncomfortable. Both ears were draining. There were many ulcerated lesions in the mouth and throat. The tonsils were hypertrophied and injected. The pharynx was also injected. Coarse bronchial rales were present at the base of the right lung. The heart rate was rapid. The abdomen was negative. The skin was dry and had a papular rash.

The urine contained a trace of albumen, and an occasional pus cell, but otherwise was negative. Primary smears made from the ulcerated lesions in the mouth, showed an occasional spirochete and fusiform bacillus.

Hospital Course and Treatment—The temperature ranged from 103 to 104.5 degrees, and the pulse from 140 to 160. The ears and pharynx were irrigated with normal saline. The ulcerations in the mouth and throat were treated with sodium perborate paste. The general condition of the patient gradually became worse. On Feb. 10, four days after admission, 0.25 mg. of sulpharsphenamine was given to control the spreading ulcerations. On the 12th a blood count was done, the red blood cells numbered 1,300,000, the hemoglobin was 30 per cent and the leukocytes 2200. The differential smear showed lymphocytes 100 per cent, which was rechecked and found to be correct. Cells belonging to the myeloid series were especially searched for but none could be found. A blood culture taken



at this time was later reported as sterile. Throat cultures also taken at this time were reported as negative for hemolytic streptococci. At the same time a blood transfusion was done, the patient receiving 75 cc. of citrated blood. Her condition gradually became more grave, the temperature slowly dropped to 99 degrees, the pulse went to 150, and the respirations went to 50, shortly before death on Feb. 13, the fourth week of the disease, seven days after admission.

After the diagnosis of agranulocytic angina was made, there was insufficient time to try out the efficacy of the nucleic acid derivatives, adenine sulphate, or pentonucleotide, as the child died shortly after.

Necropsy—The body was that of a well-developed, well-nourished white female, 18 months of age. There were many ulcerations on the buccal and pharyngeal mucosa, including the hard and soft palate. These ulcerations had a greenish yellow appearance. Microscopic examination of these ulcers revealed the absence of polymorphonuclear leukocytes in the inflammatory area, and only a small number of lymphocytes. The pleural, pericardial, and peritoneal cavities were not remarkable. The heart muscle was flabby, and microscopically there was a moderate amount of degeneration of the myocardium. Both lungs had the gross appearance of an early bronchopneumonia. Microscopically, the alveoli contained a hemorrhagic exudate that was devoid of polymorphonuclear leukocytes. The liver was yellow, and acutely degenerated, as were also the kidneys. The spleen was congested. The pancreas, intestines, bladder, adrenals, thymus, brain, and meninges were not remarkable. The bone marrow, on microscopic examination, contained only an occasional cell that could be identified as belonging to the granulocytic series. Undifferentiated cells were present in the usual number, but the forms leading to the more mature leukocytes were absent. Examination of blood smears made post mortum, showed lymphocytes 100 per cent. *Bacillus coli* was recovered from a culture of the heart's blood.

### Discussion

This case is presented as one of agranulocytic angina, as there were present both the angular symptoms and the granulocytopenia, the neutrophils being completely absent in this case. The bacteriologist's report of an occasional fusiform bacillus, and spirochete present, in the lesions from the mouth and pharynx, was far from proving the organisms of Vincent's angina, as being the etiologic factor of the ulceration in this case, since small numbers of these organisms are frequently found in the normal mouth. The bilateral otitis media may possibly have contributed to the agranulocytic state, on the basis of a toxic, exhausted, bone marrow, resulting from an overwhelming infection. This, however, the author does not believe

to be the case in this instance, since middle ear infections are very common in young children, and almost invariably show a leukocytosis. The sulpharsphenamine is another factor which should be considered, since it was administered before the blood count and differential was done. Although the arsenicals are known sometimes to produce agranulocytopenia, this is relatively rare and requires several doses. In this case, only one small dose was given, and as all the symptoms of the disease were present before its administration, it may be regarded as only an incidental occurrence, and not as contributing to the condition.

### Conclusions

1. Agranulocytic angina may occur in infants.
2. Lesions around the mouth and throat justify a complete blood count, because of the possibility of agranulocytic angina, and the necessity for starting proper therapy, promptly.
3. Arsenicals should be used with care in the treatment of ulcerative lesions in the mouth and pharynx, and only after a proper diagnosis of Vincent's angina has been made.

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### TREATMENT OF ACUTE PULMONARY ABSCESS

S. U. Marietta, Washington, D. C. (Journal A. M. A., April 28, 1934), believes more than 50 per cent of acute pulmonary abscess cases can be brought to a satisfactory conclusion by medical treatment alone. The essential feature of medical treatment is "postural drainage." The treatment is so simple that it can be carried out in the patient's home by the general practitioner so long as adjunct measures are not required. Bronchoscopic drainage is an important adjunct to the medical treatment of acute lung abscess. The recognition of the limitations of medical treatment and the decision as to when surgery is advisable are important and responsible requirements. An appreciation of the difference between acute and chronic lung abscess is necessary in order to outline and carry out treatment properly.

## THE MENACE OF A WEAK URINARY STREAM IN ELDERLY MEN

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Although the menace of a weak urinary stream in elderly men may seem a point too obvious for amplification, it is one that has been particularly impressed upon us during the last three years. During this time our attention has been intensively directed to the diagnosis, relief and postoperative care of prostatic obstruction: on making rounds of the hospital the scarcity of serious complications in those cases in which the patient's health and strength had not been exhausted by prolonged neglect of this vital symptom has been daily forced upon us.

The gradual weakening of the urinary stream has been too often regarded by the patient as solely the result of age. Too often too his doctor has concurred, failing to appreciate that a weak stream is caused by a definite, removable lesion that is not a necessary part of old age. For this reason nothing is done about it by the patient and nothing suggested by his doctor until acute retention sharply directs attention to the meaning of the weak stream. We have found this symptom the only constant and dependable one in patients needing relief from urinary obstruction. Frequency in urination at night can not be depended upon unless residual urine and infection arise early. Frequency in voiding and other symptoms often develop after the prostate has become so large that prostatectomy or two or more resections are required to afford relief, or after back pressure has greatly damaged the kidneys.

In all medicine there is no symptom more dependable or more often seen in the elderly man, nor one which has more meaning or that carries a graver threat than a weak stream. Yet few insurance companies ever inquire about it and few physicians ever ask pertinent questions concerning it. While every man knows the importance of sending for a plumber to unstop a clogged sewer pipe in his house, often he will allow his own

urinary stream to become weaker and weaker until acute retention supervenes. Without doubt, however, adequate attention to this one symptom would add more years of comfort than could attention to any other sign or warning that is afforded.

The emphasis placed on the weak urinary stream is not intended to convey the impression that there are not other important symptoms of prostatic obstruction, nor is it intended to carry the idea that every patient with a weak stream is in need of having the obstruction removed. Unfortunately for the elderly man, senility and the changes brought about by old age are so often blended with the symptoms caused by prostatic obstruction that accurate differential diagnosis is constantly neglected. All of the factors involved in each case should be considered before any decision is reached. There are often clear-cut reasons why an elderly man with a weak stream should have only palliative treatment, and why a man with a weak stream caused by a bar can safely postpone relief measures. Yet of all the remedies recommended to postpone the inroads of time or to bring about the rejuvenation of elderly men, all combined can not, we feel sure, offer as much as can relief of obstruction at the neck of the bladder.

We believe that the chief reason that so many physicians permit a period of neglect of this symptom is because they have not oriented themselves to the changes brought about by the endoscopic removal of prostatic obstruction. Criteria employed formerly when prostatectomy was the best means available for the relief of prostatic obstruction are still regarded by many doctors as applicable to patients who may now be relieved of their obstruction by the less dangerous method of transurethral resection.

There are still grounds for diversity of opinion as to the best means of relieving obstructions when the prostatic masses to be removed are large. However, urologists are agreed that fibrous contractions and bars at the vesical neck as well as prostatic masses of small size should be handled by transurethral methods, because with this method the mortality rate is lower, the pain is less, the period of hospitalization is shorter and the



results when adequate resections are performed are as good and probably as lasting as those which follow prostatectomy skillfully done.

In our own work we now have a series of 340 consecutive transurethral resections with but one death in any patient 75 years of age or younger. Many of the patients in the series were older than 75, not a few wholly unfit for prostatectomy: in this group there were five deaths, three from heart failure, one from pneumonia and one from uremic coma. If all of these 340 men had been subjected to prostatectomy, there would unquestionably have been a death rate far in excess of that obtained by the resection method. Other urologists have had similar experiences with resection.

Since the method of transurethral resection is undoubtedly superior to prostatectomy in removing obstruction caused by small masses and is also much safer, it is hardly fair to the elderly man to disregard obstructive symptoms until he has passed the point when this relatively mild procedure can prevent the need of a more dangerous one later. It is true that our statistics indicate that the great majority of patients even when neglected can be relieved by the transurethral method. Yet this relief often entails increased dangers and the cost of many weeks or months of delay in the hospital with drainage to improve the blood chemistry and overcome infection and to coax back enough strength to enable the patient to put up a satisfactory fight when subjected even to this mild relief measure.

The dangers and complications of transurethral resection have been found to vary directly with the duration of the obstruction and the size of the mass causing the obstruction, as well as with the skill and experience of the operator. To postpone relief until the patient has become a poor operative risk or perhaps moribund is just as unwise as to wait for an appendix to rupture before advising operation: here the results of neglect are dramatic and tragic; less dramatic but not less tragic are the results of neglected urinary obstruction, the symptoms of which are constantly being mistaken for the natural consequences of age and senility.

We feel that it is always safe to advise a patient that he need have no fears of obstruction as long as he voids a good stream. Obviously the converse is equally true, a weak stream always needs attention, at least until its cause is ascertained and all of the factors involved are carefully evaluated. When there are adequate reasons for believing that at a later time relief of the prostatic obstruction is going to be necessary, it surely is poor judgment to postpone the procedure until the relief required necessitates a dangerous operative measure and upon a patient who then may be a poor surgical risk. Is it not far better for a man to do things to keep himself young-for-his-age than to depend upon late repairs with the hope that rejuvenation may follow? In dealing with urinary obstruction, prevention is surely quite as important, if not more important, than in any other field of medical endeavor.

To sum up, many of the disorders seen in elderly men, and often attributed to age alone, can be prevented or cured by relief of vesical neck obstruction and a weakened urinary stream affords a dependable guide in giving advice about such conditions.

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#### SURGICAL TREATMENT OF INGROWN TOENAILS

E. Lawrence Keyes, St. Louis (Journal A. M. A., May 5, 1934), presents the results of surgical treatment of ingrown toenails in 110 operations performed by twenty-six different surgeons in three separate institutions. He observed that the rate of recurrence of ingrowth of the nail following operation is high and that the rate of healing of many of the operative wounds is prolonged. The rate of recurrence was 13.6 per cent. The operative wounds required an average of nineteen days to heal. Recurrences were attributed either to the performances of an operation inadequate in type or to failure at operation to remove the necessary amount of nail-bearing matrix or of nail wall. No recurrence could be ascribed to growth of new nail from eponychium. Since the eponychium ordinarily was not excised at operation, this structure would seem to lack the nail-forming function attributed to it by some authors.

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The Medical Association of Georgia will hold its Eighty-Sixth Annual Session in Atlanta, May 7th-10th, 1935.

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The Southern Medical Association will hold its Twenty-Eighth Annual meeting at San Antonio, Tex., November 13th-16th.

**THE JOURNAL**

OF THE

MEDICAL ASSOCIATION OF GEORGIA

Devoted to Welfare of Medical Association of Georgia

139 Forrest Avenue, N.E., Atlanta, Ga.

NOVEMBER, 1934

## PRESIDENT'S COMMUNICATION

To the members of the Medical Association of Georgia:

No organization can function properly, and successfully without the individual help of its members.

The work in our Association is carried on chiefly through its committees. The members of the different committees usually await the leadership of their chairman. All these committees have been appointed, and we sincerely hope they will be active in their various capacities. Every individual member of the Association should actively support all constructive measures which may be sponsored.

Our Committee on Public Policy and Legislation will undertake to get through the next legislature certain measures for the interest of public health and the profession. No lobbying around the capitol is half so successful as the work that can be done by the physicians in the individual counties.

Now since you know who your representatives and senators are contact them in regard to such measures as may be sponsored by the Association.

I also wish to ask your co-operation with the State Board of Health in its effort to promote certain public health measures. At present an organization is being sponsored by the State Board of Health in conjunction with the pediatricians and certain lay organizations in behalf of child welfare, the object of which is to protect the health and lives of the children of our state. Also the Georgia Pediatric Society, during the latter part of November will render Health Day programs in certain towns throughout the state, and I hope the physicians will give their utmost co-operation, and make it a success.

These are very laudable undertakings and

deserve the support of every member of our Association.

No more important work could be undertaken by the individual county societies than that of systematically putting on a vaccination program against small pox, diphtheria and typhoid. Approximately 130 counties in the state have no county health officer, and if the people in these counties are to get the benefit of these vaccines they must be given by the physicians practicing in those counties.

Our Cancer Commission is offering to put on at each district meeting a cancer clinic, and I feel sure that this will materially aid in bringing cancer information to the people. A considerable per cent of the cancer cases in Georgia are being treated by the quacks, and do not get in touch with those who are qualified to treat cancer until it is too late to be benefited. Let's co-operate with our Cancer Commission in this excellent work.

I especially wish to urge each county secretary to undertake during the next few weeks to get every physician in his county, who is eligible, to become a member of the county society and state Association. The Association needs them, and they need the benefits furnished by the Association.

In visiting the district meetings over the state it has been very gratifying to me to see the interest manifested in organized medicine, and the desire of its members to better equip themselves for service. I hope to visit every district in the state before the year is out.

CLARENCE L. AYERS, M.D.

*President Medical Association of Georgia.*  
Toccoa.

*The JOURNAL would like to record the scientific work of Georgia doctors. It earnestly requests, therefore, that each physician in the State who publishes a contribution in some other medical periodical submit an abstract of the article for these columns.*

The American Nurses' Association had an active booth at the American Hospital Association meeting in Philadelphia, Sept. 24-28, "Featuring the 8-hour day." The booth was in charge of Miss Ethel Swope, Assistant Director of the A. N. A.



## ANNUAL CONFERENCE OF THE SECRETARIES OF THE CONSTITUENT STATE MEDICAL SOCIETIES

The Secretaries met on September 21, 1934, at the Palmer House, Chicago, Ill., and were called to order by Dr. J. H. J. Up-ham, Chairman of the Board of Trustees of the American Medical Association. Dr. Robert L. Parker, of Iowa, was chosen chairman.

He emphasized the fact that this meeting was of such importance to the medical profession of the United States that not only the Secretaries, but the President and Chairman of Council of every constituent state association should attend, thus better coordinating the medical activities throughout the country.

The first paper of the day, "The Medical Society of New Jersey Experiments in Furnishing Medical Services in the Community" by Le Roy A. Wilkes, Executive Secretary of the Medical Society of New Jersey; and the second paper, "The Centralization and Departmentalization of State Medical Society Activities" by Oliver J. Fay, chairman of the Board of Trustees of the Iowa State Medical Society, were read before discussion was called for.

So many points had been raised in the two papers that the discussion was divided, jumping from one paper to the other, but in the last analysis the gist of it all was that the fear of "State Medicine" was not causing near the panic as in the past few years—that the pendulum had begun to swing back, and that there was a more general feeling that medical matters must be administered by medical men.

Reports of numerous state and county relief organizations were heard. Dr. C. H. Smith, of Seattle, Wash., reported that they have an organization for the relief of the small income group that has about 8,000 members. The initiation fee is \$10.00 and the monthly dues, \$3.00. Fifty per cent of the amount collected is taken for overhead expenses and the remainder goes to the doctors. A permanent fund has been established for emergencies and this now amounts to \$10,000.00.

One of the most enlightening papers on

"Medical Emergency Relief" was presented by Dr. Holman Taylor of the State Medical Association of Texas. It was discussed by Dr. William C. Woodward, Director of the Bureau of Legal Medicine and Legislation of the American Medical Association.

The principal points stressed were that F.E.R.A. was an emergency unprecedented, with which the municipal and county forces could not cope—and that the doctors of Texas reduced their ordinary charges one half as a patriotic duty. That this feeling on the part of the doctors should not be given too much publicity to the laity on account of the difficulties which might be encountered in restoring the regular charges for medical services when this emergency has passed.

Dr. Taylor emphasized that contracts can be made only by *local* relief associations and *local* medical societies. Further, that in Texas, practically all county medical societies had cooperated and that where the federal relief directors had refused to cooperate, every effort was made to have them removed and others appointed who would. In every instance where trouble had arisen, it was found to be on account of *ignorance* or lack of interest. The doctors in Texas have passed a resolution demanding payment for indigent patients in hospitals just the same as for other indigent patients.

Dr. Woodward, in discussing this point, stated that there was no sense in treating patients in the home and receiving pay and treating the same patient in a hospital and not getting pay; however, that state funds should be used for *hospitalization* and federal funds for *treatment*.

Colorado reported that the physicians of that state were receiving seventy per cent of their usual charges for relief work. The only exceptions being Denver and two other counties.

Louisiana made an interesting report. They stated that the Louisiana State Medical Society sent to the Federal authorities at Washington a F. E. R. A. schedule which was refused because of the charges being too high. The F. E. R. A. then sent to Louisiana a schedule which the doctors considered too low. Recently another attempt was made and the Louisiana doctors were asked for their

regular fee schedule. This was furnished and since July 28, 1934, the F. E. R. A. allows 75 per cent of the regular fees.

Dr. Taylor, in closing, said that the preponderance of discussion showed that the federal administrators are becoming better acquainted with the needs and demands of the doctors and that closer cooperation between these and the local medical societies is the best solution.

Dr. Woodward, in closing, stated that when a man is put to work by the F. E. R. A. his family should still remain on the list of indigent and that the doctor should be paid by the federal fund.

Other interesting papers were read, all tending to emphasize the fact that the same problems confront the medical profession in every state in the union and that they have to be handled by a closer understanding between the federal and medical authorities and that no set up pertaining to medical matters can be made except *by* and *through* medical men.

All who attended the Conference of the Secretaries were very appreciative of the many courtesies shown by Dr. Olin West, Secretary of the American Medical Association, and members of the headquarters staff.

WILLIAM A. SELMAN, M.D.

#### HONOR ROLL FOR 1934

1. Randolph County, Dr. G. Y. Moore\*, Cuthbert, December 12, 1933.

2. Macon County, Dr. Thomas M. Adam, Montezuma, January 13, 1934.

3. Henry County, Dr. H. C. Ellis, McDonough, January 18, 1934.

4. Hancock County, Dr. H. L. Earl, Sparta, February 17, 1934.

5. Wayne County, Dr. A. J. Gordon, Jesup, March 12, 1934.

6. Monroe County, Dr. G. H. Alexander, Forsyth, March 19, 1934.

7. Ware County, Dr. Kenneth McCullough, Waycross, March 19, 1934.

8. Turner County, Dr. J. H. Baxter, Ashburn, March 24, 1934.

9. Lamar County, Dr. J. M. Rogers, Barnesville, April 2, 1934.

10. Whitfield County, Dr. H. J. Ault, Dalton, July 28, 1934.

11. Cherokee County, Dr. Geo. C. Brooke, Canton, October 23, 1934.

\*Deceased.

#### ANNOUNCEMENT OF THE COMMITTEE ON SCIENTIFIC WORK

At a meeting held by the Committee on Scientific Work in Atlanta, October 18, 1934, it was decided to make the following announcement:

The Committee desires to have as many papers as possible submitted so that a wide choice may be made for the program of the meeting of the Medical Association of Georgia, which will be held in Atlanta next May 8, 9, 10. The titles must be in the office of the Chairman of the Committee by February 1, 1935. It is imperative that a short abstract of about 50 words accompany the title so that the Committee can judge the paper more carefully. We are anxious to get papers only of outstanding merit as the scientific program must be an outstanding part of the meeting. While we know that most of the papers usually come from big cities attention will be given to every title and if possible the program will be made up from the membership at large. There are only 28 places on the program and we hope to get a sufficient number of papers to be able to coordinate the different sessions of the meeting.

The Scientific Exhibit in the past has not been what it should have. We are making a special appeal to both the medical universities, the general hospitals, and to the individual members to begin now correlating this material so that an interesting exhibit may be secured at the time of the meeting. Should anyone know of some interesting work done by some members of our profession we urge you to notify the Chairman of this Committee so that we may extend a special invitation to those persons to read a paper before our Association.

#### COMMITTEE ON SCIENTIFIC WORK.

Joseph Yampolsky, M.D., Chairman.

S. T. R. Revell, M.D.

George A. Traylor, M.D.

Allen H. Bunce, M.D., Sec'y.-Treas.

The United States Treasury Department issues weekly Public Health Reports by the United States Public Health Service. Copies may be obtained from the Superintendent of Documents, Washington, D. C., 5c.



## ATLANTA'S EXPERIMENT

Mark Twain said that "everybody is always complaining about the weather, but nobody does anything about it." A rural doctor in Georgia, at the convention of his State Medical Association, made a rather similar remark about the medical economic crisis. "All this talk about medical economics is just 'bull'," he declared. "We are not going to do anything about it. We meet, talk, go home, and cuss, and it is all the same." Medical societies pass resolutions that are published in the newspapers, speakers flay the report of the Committee on the Costs of Medical Care, but much of the fire ends in smoke.

The physicians in one city, however, have decided that the policy of mere talk has gone on long enough. The medical men of Atlanta have had a committee at work on the matter for nearly two years, the committee has formulated a plan, the plan has been adopted, and on April 1 it was put into operation.

The Atlanta plan is based upon the minority report of the Committee on the Cost of Medical Care. The minority report, it will be remembered, recommended a county medical society plan for furnishing complete medical care to persons in the low income bracket. It advised the furnishing of medical care by the individual physicians as they are at present organized in county societies, the plan to be kept under professional control, and financed by annual payments under a group arrangement. The plan, too, guaranteed the absolutely free choice of physician and was to include all or a large majority of the county medical society, with the funds administered on a nonprofit basis.

Such a plan places the responsibility for the medical care of the community squarely upon its organized physicians and bars control by lay corporations and insurance companies. The quality of the medical service is thus guaranteed and the possibility of unethical competition is removed because all the physicians of the community are included and the fee schedule is fixed. Solicitation of patients, underbidding for contracts, and other evils of ordinary plans are eliminated and the essential personal relationship of doctor and patient is preserved.

It is upon this basis that the Atlanta physicians have built their plan, after nearly two years of careful study by their committee. They have organized the Fulton County Medical Relief Association, and out of 387 members of the Fulton County Medical Society, 268, or more than two-thirds, have

indicated a desire to co-operate. Of the rest, some are indifferent, some more or less hostile, and "some few" irreconcilable.

The report to the Medical Association of Georgia, from which these facts are gleaned, points out that the new Association does not agree to furnish medical service to anyone, but simply agrees to pay the doctor who renders the service. Any co-operating member of the County Medical Society may respond to calls from the beneficiary members, or he may decline the call precisely as under the old plan.

Patients of low income may obtain medical care under this plan for \$1 initiation fee and \$1.50 a month. The privilege of membership is open to any white person in Atlanta and vicinity who is in good health, except drug addicts and alcoholics. To keep the well-to-do from flooding in the income level of those who join is not to exceed \$75 per month for persons without dependents, \$125 per month for those with one dependent, \$135 for those with two, \$145 for those with three, and \$150 for those with four. Membership is limited to individuals. Separate membership may be carried for other members of the family. The Association is controlled by a board of five directors, all physicians, elected from the membership of the County Medical Society and serving without pay. Details are handled by a lay manager.

It is too early to forecast the fortunes of the venture, but the committee feels optimistic. It figures that the Association must have 5,000 beneficiary members on its rolls to ensure success, and 10,000 would be better yet. Physicians, too, must accept lower fees than are considered standard, and the County Medical Society has adopted such a schedule upon the realization that, even if lower, it will produce a larger return from the same group than the old plan did.

Here, then, we have an honest effort to head off the threatening socialistic plans with a scheme that will preserve the essentials of present medical practice and ethics. It meets the regimenting plan with a doctor's plan. It meets any proposed or paper plan with a plan already in actual operation. It may not be the best one imaginable. If anyone can suggest improvements, so much the better. But if we can meet the socializers and regimentalists with well-based medical plans already adopted and in operation, then their finespun schemes and dreams will not have, if the expression may be pardoned, a Chinaman's chance.—New York State Journal of Medicine, Albany, N. Y., September 15, 1934.

GEORGIA DEPARTMENT OF PUBLIC HEALTH

T. F. ABERCROMBIE, M.D., Director

AN EPIDEMIOLOGICAL CONSIDERATION OF TYPHOID FEVER IN GEORGIA, BASED ON REPORTS OF PHYSICIANS 1933

Data for this report is based upon reports of physicians of the State to the State Department of Health for the year 1933. Compilation and tabulation of this data reveals some interesting information with reference to typhoid in this state.

Of a total of 1,118 cases of typhoid fever reported, complete data with reference to color and sex was obtained in 1,029 cases, which is summarized in Table I.

TABLE I  
*Cases of Typhoid Fever Reported In Georgia During 1933, by Color and Sex, with Case Rates*

	Both Sexes		Male		Female	
	No. Cases	*Case Rate	No. Cases	*Case Rate	No. Cases	*Case Rate
White	598	31.6	329	34.7	269	28.5
Colored	431	39.5	234	44.8	197	34.7
Total	1029	34.5	563	38.8	466	30.8

\*Rate per 100,000 population.

From this table it may be seen that the typhoid morbidity rate for both sexes and races is 34.5 per 100,000 population. With reference to the sexes, the rate for males is higher than females, 38.8 and 30.8 respectively. The rates for white and colored males and females are tabulated separately; for white males 34.7, white females 28.5; and for colored males 44.8, and colored females 34.7 per 100,000 population.

Interpretation of Table I indicates a recognized fact with reference to typhoid fever, that morbidity among males is higher than females, believed to be associated with occupational and environmental conditions—males because of their occupations and environment are more subjected to chance infection than females. Special attention is called to the higher rates among both sexes of the colored race, but the high rate among colored males, as compared with colored females, is maintained as a sex characteristic—the colored male through his daily occupation and environment is more subjected to infection than the female. It is interesting to note that the colored female shows as high a rate as the white male. The high rates for the colored race is doubtless due to the fact that the negro lives under hygienic conditions much less favorable than the white race.

With reference to the age groups, out of the 1,123 cases reported, the ages of 965 patients were given. Table II shows the tabulation of this data with reference to the case incidence of typhoid in the various age groups. For a specific reason, cases up to 10 years of age are grouped by single years, from 10 to 55 years in 5 year periods and above 55 in 10 year periods.

TABLE II  
*Cases of Typhoid Fever Reported In Georgia During 1933, by Ages*

Ages	No. Cases	Ages	No. Cases
Under 1 year	1	15-19 years	155
1- 2 years	2	20-24 years	151
2- 3 years	7	25-29 years	110
3- 4 years	9	30-34 years	73
4- 5 years	20	35-39 years	33
5- 6 years	26	40-44 years	36
6- 7 years	31	45-49 years	27
7- 8 years	21	50-54 years	19
8- 9 years	28	55-64 years	21
9-10 years	31	65-74 years	4
10-14 years	156	75 and above	4

It is readily seen out of the 965 cases in which the age of patients was specified by the physicians, only one case of typhoid fever occurred under one year of age. However, this ratio is soon changed, and based on the reports of other years and from different health departments, it is believed that the child becomes susceptible soon after the first year of life and then should be immunized along with older children and adults.

It may be seen farther from Table II that of the entire span of life the first three decades are the most important with reference to susceptibility to typhoid fever; for of the 965 cases, 748 cases occurred during the first three decades of life. These figures correspond in general to those gathered by health officers and epidemiologists elsewhere, and apply in both epidemic and endemic conditions under which typhoid spreads. However, too much emphasis cannot be placed on the fact that typhoid fever does invade much older age groups. In fact, it may be seen in Table II that four individuals above 75 years of age contracted typhoid fever in 1933 in this state. While this number is small, the fact that should be borne in mind is that the number of people living above 75 years of age is also small as compared with those living in the first three decades of life. It would seem then that there is no room for the as-



sumption that those above 60 years of age, as sometime stated, are "too old" to contract typhoid fever, for there is no age above which individuals may not contract the disease under favorable conditions for its spread, unless, of course, a previous typhoid infection has permanently immunized the individual, which, within itself, is not always the case.

The seasonal incidence of typhoid fever follows a rather definite pattern from year to year. Table III shows the number of cases of typhoid reported by months for 1933.

TABLE III

*Cases of Typhoid Fever Reported In Georgia During 1933, by Months*

Month	Cases	Month	Cases	Month	Cases
January	24	May	60	September	174
February	19	June	213	October	84
March	14	July	199	November	63
April	33	August	186	December	49

From the above table it is seen that there is a definite rise in the incidence of typhoid in the spring, more particularly May, and this rise increases and is maintained throughout the summer months and late into fall. From this table a curve might be plotted which would show graphically the increased summer incidence. This curve may be plotted from year to year, and in general it will follow the pattern for 1933. By some epidemiologists it has been called the "insanitary curve" of typhoid fever, and indicates, to a large extent, fly-bourne infection under gross insanitary conditions. The infection of food and drink by flies plays a large roll in the large increase of typhoid during summer months.

A number of workers elsewhere, particularly in the South, have called attention from time to time to the large amount of typhoid fever in rural areas and small towns. In table IV cases of typhoid are grouped under Rural and Towns up to 5,000 population and Towns above 5,000.

TABLE IV

*Typhoid Cases Reported In Georgia During 1933, With Case Rates Per 100,000 Population*

	State	Rural and Cities to 5,000 Population	Cities of 5,000 Population and above
*Population	2,677,872	1,484,100	93,772
Cases reported	1,131	859	272
Rate	42.23	57.88	34.26

\*Total population of areas from which typhoid fever cases were reported.

In the rural areas and towns to 5,000 population there were 859 cases, with a case rate of 57.88 per 100,000 population, as against 272 cases in towns of 5,000 and above, with a case rate of 34.26 per 100,000. These rates are not surprising. In many rural areas sanitary conditions are deplorable, and in a number of smaller towns similar conditions prevail. Some towns have not extended sewer lines with their growth and extension, and in many places open privies are still tolerated, even where food and drink is handled.

#### GEORGIA STATE NURSES' ASSOCIATION MEETING

The Twenty-Eighth Annual Convention of the Georgia State Nurses' Association was held in Athens, November 5, 6, 7, Hotel Georgian was headquarters.

Among the prominent speakers who addressed the meetings were Dr. S. V. Sanford, President of the University of Georgia; Miss Gay B. Shepperson, Director Georgia Emergency Relief Administration; and Miss Meda Marsh, Chairman, Private Duty Section, American Nurses' Association, Okmulgee, Okla.

Those who appeared on the program of the state organization of Public Health Nursing were: Dr. D. L. Seckinger, Chief of the Division of Epidemiology, State Board of Health, Atlanta; Dr. J. E. Green, Professor of Psychiatry, University of Georgia; and Mrs. Abbie Roberts Weaver, B. S., M. A., R. N., Georgia Emergency Relief Administration, Atlanta.

The Georgia League of Nursing Education had Dr. E. D. Pusey, Peabody College of Education, University of Georgia, as one of its speakers who addressed the organization on "The Extra Scholastic Curricula in Schools of Nursing and Post-graduate Course." There was a round table discussion by a number of instructors of nurse training schools.

#### CONVULSIONS IN CHILDHOOD

M. G. Peterman, Milwaukee (Journal A. M. A., May 26, 1934), states that a revised classification of convulsions in 500 children demonstrates the basic diagnosis as epilepsy in 33 per cent of the cases, onset of acute infection in 22.8 per cent, cerebral birth injury or residue in 15.4 per cent, spasmophilia in 13.6 per cent, miscellaneous causes in 8.8 per cent and cause unknown in 6.4 per cent. There was no recognized case of cerebral sinus thrombosis, allergic basis, hypoglycemia or hyperinsulinism in this series. Of the convulsions, 6.6 per cent occurred in the first month of life, 13.6 per cent in the second five months of life, 40.2 per cent between 6 and 36 months of age, 26.4 per cent between 3 and 10 years of age and 6.4 per cent between 10 and 15 years of age. In 6.8 per cent of the cases the age of the child at the time of the first convulsion could not be obtained.

## NOTICE TO PHYSICIANS WHO HAVE ATTENDED WOMEN DYING DURING PREGNANCY, LABOR OR THE PUERPERIUM FOR THE PAST YEAR

The Committee appointed by Dr. C. L. Ayers, of Toccoa, President of the Medical Association of Georgia, to study Maternal Mortality and Infant Deaths for the State of Georgia has started its work on this huge undertaking. The study will require time, expense, and an enormous amount of work. It is impossible to make such a study without the cooperation of the physicians of this State, because you, alone, have a complete knowledge of the conditions involved in the individual cases.

Within a short time we plan to submit a brief questionnaire to you in reference to cases that you have attended. We beg of you to devote a few minutes of your time in studying and answering this questionnaire. Its purpose is not that of criticism, suggestion, or comparison. We merely desire statistical data, and hope that you will cooperate by answering and returning these questionnaires to the Committee as soon as possible.

We believe that this is a valuable and instructive piece of work, and the Committee is diligently working in order to make a report that will be of value, both to the physicians and laymen of our state.

*Committee for the Study of Maternal Mortality and Infant Deaths.*

E. D. COLVIN, M.D., *Chairman*

## HANDMAIDENS OF CHILD HEALTH

LOUISE STRACHAN

*Director, Child Health Education  
National Tuberculosis Association*

Tuberculosis and child health seem miles apart, but a closer examination of the treatment of the one and the protection of the other makes clear their relationship.

Fresh air, rest, and an adequate diet have come to be accepted as the handmaidens of child health, but it was not always so. Our knowledge of their value is amazingly new. It is only 50 years ago that Dr. Edward Livingston Trudeau opened "Little Red," the first sanatorium in the United States for the mod-

ern treatment of tuberculosis. The emphasis was on fresh air—plenty of it—and rest. There were very few physicians who agreed with Trudeau on this regimen. Trudeau's brother had died of tuberculosis and the doctor in charge of the case had repeatedly emphasized the danger of opening the windows!

By 1904 the success of the sanatorium treatment had been sufficient to win many converts and it led to the development of the treatment for debilitated children. In this country the first open air school was opened in Providence, Rhode Island, by the Providence Tuberculosis League, and fresh air, feeding and rest periods, with a modified academic program, formed the regimen. Such schools spread quite rapidly over the country, promoted very largely by tuberculosis associations. At first the major emphasis was on fresh air, and it was considered of greater importance than either food or rest. By 1920 the emphasis had shifted to nutrition, minerals and fats came to be of paramount importance in the treatment of pupils physically below par. Indeed the term "undernourished" came into general use to describe these children. More recently rest has come to occupy first place among protective measures for the care of delicate children.

In the meantime, how were other children faring in regular classrooms? Dr. J. F. Rogers of the United States Office of Education says: "The open-air school and its results had a decided influence in bringing about a lowering of the temperature of all school-rooms, for it was logical to believe that if it was beneficial for a delicate child to be exposed to out-of-door temperatures it would be of some benefit to the average child to sit in a room which was not overheated. The open air school of the first decade of the century had a powerful influence upon the school housing, and the school and home feeding, of a very large proportion of all children in the past decade." As for rest periods, the progressive schools are beginning to provide these for all students. The Los Angeles County, California, course of study definitely states: "The school program should be such as to avoid the accumulation of fatigue. A rest period should be provided during the school day for every boy and girl."

To the little penny Christmas Seal, sold each year to finance the work of the National Tuberculosis Association and its 2,000 affiliated associations, is due much of the credit for this advance in health knowledge. This year the "Little Red" forms the design of the Christmas Seal in celebration of that tiny sanatorium's 50th birthday and in commemoration of the measureless contribution it has made to the health and happiness of the children of the United States.

The Public Health Service, Washington, D. C., publishes monthly a bulletin known as "Venereal Disease Information." Subscription to the publication is 50c per annum. In a letter from the Public Health Service it is stated that syphilis and gonorrhea are the most prevalent of communicable diseases.



## WOMAN'S AUXILIARY OFFICERS

President—Mrs. J. E. Penland, Waycross.

President-Elect—Mrs. E. R. Harris, Winder.

First Vice-President—Mrs. Ralph H. Chaney, Augusta.

Second Vice-President—Mrs. J. M. Barnett, Albany.

Third Vice-President—Mrs. G. Hugo Johnson, Savannah.

Recording Secretary—Mrs. Warren A. Coleman, Eastman.

Corresponding Secretary—Mrs. B. H. Minchew, Waycross.

Treasurer—Mrs. Chas. H. Richardson, Macon.

Parliamentarian—Mrs. Mather M. McCord, Rome.

Historian—Mrs. M. F. Haygood, Alto.

Chairman Public Relations—Mrs. Evert A. Bancker, Jr., Atlanta.

Chairman Press and Publicity—Mrs. J. Bonar White, Atlanta.

Chairman Legislation—Mrs. Dan Y. Sage, Atlanta.

### PURPOSE AND VALUE OF WORK

There is need to strengthen present auxiliaries and to organize new ones. When eligible women tell you that their communities are over organized, tell them that only one organization is authorized by the medical profession to serve it as an Auxiliary and only a medical Auxiliary is responsible in turn to the profession. If other organizations are assuming health leadership, then there is no control of what the public thinks and does in regard to medical practice and health activities. Such organizations cannot have the viewpoint of the physicians, their efforts are frequently misdirected, sometimes vicious and because they can be presented spectacularly, cause not only deviation but some times alienation in public opinions and desires, so rational control by the medical profession may become impossible.

You never support an organization to which you do not belong; you cannot be a staunch member unless you have knowledge of the functions and fruition of its purposes. So attend your Auxiliary meetings. Become acquainted with the members. Study the objectives for the year. We suggest as our program on Mother Welfare, that presidents follow this study plan, asking a physician to speak to you each time.

1. Why Mother Welfare was chosen for Auxiliary program.  
Status of Maternal Welfare and of cancer in Georgia.
2. Primitive attitudes towards childbirth and care of the pregnant woman.
3. The story of Midwifery.  
Rise of midwifery.  
Early regulations to control midwives.  
How and why midwifery became an impediment to the advance of obstetrics.  
Ancient Greek and Roman practices.  
Soranus.  
Attitudes toward childbirth during the Middle Ages.

Pare and the reintroduction of the podalic version.

4. The beginning of obstetrics.  
The invention of the forceps.  
Reaction against operative interference at childbirth.  
The temporary loss of obstetrics as a branch of surgery.  
The practice of midwifery in Georgia.  
Control by State Board of Health.
5. Childbirth, or puerperal fever.  
Primitive and ancient hygiene of pregnancy and childbirth.  
Hospitals of the Middle Ages.  
Observations of Dr. O. W. Holmes in the U. S.  
Semmelmweis; his work and discoveries.
6. Story of anesthesia.  
Ancient use of plants and roots as soporifics.  
Attitudes towards pain at childbirth.  
Discovery of anesthesia by Dr. Crawford W. Long of Georgia.  
First applications at childbirth. Antagonism engendered.  
Aid given by royal acceptances.  
Present advances in making childbirth less painful.
7. Surgery and childbirth.  
Essential of surgery knowledge.  
Delays in surgical advancement before Vesalius.  
Pare's contribution.  
Early courses in anatomy.  
Modern developments in regard to childbirth.  
The story of asepsis.
8. What a pregnant mother and the father should know.  
Care of the pregnant woman.

Study envelopes of the A. M. A. Auxiliary are available to study the fundamental principles of disease prevention and health promotion.

Preparation within the Auxiliary means

unified support in directing lay groups. Encourage membership because you understand its value. Coordinate your efforts with those of the medical profession in dissemination of health education and the prevention of misinformation by cultists, faddists and quacks. A little effort by each member will make a powerful state aggregate.

We need the assistance of lay groups in the development of public health, but sustaining leadership should come through the profession which provides the knowledge and the labor. Your acceptance of health chairmanships will prevent haphazard, inaccurate, wasteful programs. It will protect the medical arts and the profession. It will protect community interests, and it will mean progress.

Receive permission from local medical societies to organize. Have an advisory committee appointed, then go about organizing.  
M. B. W.

#### EIGHTH DISTRICT

The Eighth District Auxiliary met in Waycross October 9th. Mrs. B. H. Minchew, Manager, presided. Due to heavy rains, only three counties were represented, but the meeting was enthusiastically enjoyed by members and by Parent-Teacher members who were guests.

Dr. C. L. Ayers spoke on the health of the pre-school child; Dr. James E. Paullin on the connection of the Auxiliary with the Medical Society; Dr. J. L. Campbell gave an illustrated cancer lecture and Mother Welfare material was distributed. Mrs. J. E. Penland brought greetings from the State Auxiliary and discussed Auxiliary objectives and responsibilities. Mrs. J. L. Ware, honorary member of Ware county, and author of Waycross and Ware County histories, was introduced.

Mrs. W. M. Folks and the Waycross Auxiliary were hostesses at Mrs. Folks' lovely home at an informal tea in honor of the visitors. Mrs. Folks is Past Manager of the Eighth District. Later, the Medical Society and its Auxiliary dined together at the Ware Hotel.

Officers elected were: Mrs. G. W. H. Cheney, Brunswick, Manager; Mrs. A. M. Johnson, Valdosta, Vice-Manager; Mrs. F. N. Aldridge, Brunswick, Secretary-Treasurer.

The increasing panel discussions on public relations and programs are gratifying. This interchange of ideas and methods not only encourages individuals in Auxiliary work, but increases membership. An informed member stimulates others.

#### FIFTH DISTRICT

About 225 members of the Fifth District Medical Society and Auxiliary enjoyed a turkey dinner at the Academy of Medicine on Thursday, October 18th, in Atlanta. Mrs. Olin S. Cofer was in charge of the menu and all arrangements. The Fulton County Auxiliary, some years ago, equipped the kitchen and stocked the pantry at the Academy, with dishes, glassware, cutlery, trays, etc., so such dinners could be given. They mean many days of arduous preparation and Mrs. Cofer is to be congratulated on superb results. This was the fifth meeting and dinner for which she was responsible.

After dinner, the Society and Auxiliary held separate meetings, although the Auxiliary was invited to attend the Society session when its own meeting was concluded. Mrs. Cofer welcomed the Auxiliary and Mrs. Hamilton G. Ansley of the DeKalb Auxiliary responded. Mrs. Cofer introduced Dr. James E. Paullin, who brought greetings to the Auxiliary and presented Dr. Tinsley Harrison who spoke on "Facts and Fancies About the Heart." This was in part a repetition of the radio talk over WSB.

Dr. C. L. Ayers, of Toccoa, President of the Medical Association of Georgia, discussed pre-school problems, especially as they related to immunization. He urged the members to be informed and to give information to lay groups, both as an opportunity and as an obligation.

Mrs. Cofer introduced Mrs. Ernest R. Harris, of Winder, President-Elect of the State Auxiliary who brought an inspirational message on the privileges and duties of membership in service to the medical profession. A message from the State President, Mrs. J. E. Penland, was read. Mrs. C. W. Roberts, Past President of the State and First Manager of the Fifth District, was introduced.

Reports by Mrs. Cofer, Mrs. H. H. Askew, President of Fulton County Auxiliary, and Mrs. H. G. Ansley, President of DeKalb County Auxiliary, were read and filed. There are only two societies in the Fifth District and as there are now two Auxiliaries, membership will be stressed this year. Mrs. Cofer was given a hearty vote of appreciation for her work for two and a half years.

New officers installed are: Mrs. Joseph Yampolsky, Atlanta, Manager; Mrs. H. G. Ansley, Decatur, Vice-Manager; Mrs. Charles H. Daniel, College Park, Secretary. Retiring officers were: Mrs. Olin S. Cofer, Manager; Mrs. W. L. McDougall, Vice-Manager, and Mrs. H. H. Askew, Secretary, all of Atlanta.



## NEWS ITEMS

Mrs Lee Howard, First District Manager, has been appointed General Chairman of the Christmas Seal Sale for Savannah.

Mrs. Olin S. Cofer, Fifth District Manager, made the arrangements for the radio talk and introduced Dr. Tinsley Harrison, of Vanderbilt University, over WSB "The Voice of the South," on October 18. Dr. Harrison's subject was "Facts and Fancies About the Heart." He gave the eight fancies adopted by the public, explained their fallacies, then told the facts that lay people should know regarding the heart.

The Cherokee-Pickens Auxiliary met recently in Canton and members gave items of interest on health. Mrs. G. Carter Brooke, prepared a program, including a discussion of the magazine article on Dr. Locke.

The Habersham Auxiliary met at Alto and made plans for the year.

The Fulton County Auxiliary had its second meeting in October and voted \$100 for the Student Loan Fund. Mr. Claude Ashley, Ethno-Botanist, who has been a visitor and friend to the Muscogee and Cherokee Indians of Georgia, and is a student of their lives, spoke on "Medicinal Plants of Georgia Indians." It was fascinating to hear from one so intimately associated with the Indians a story of an era that has been history for many years. Mr. Ashley traced the development of Indian medicine through Indian experiences, and gave many parallels with the modern pharmaceutical use of plants.

The Georgia Auxiliary is busy planning a card party to raise funds for its Student Loan Fund.

### THE MODERN PHYSICIAN SURVEYS THE ECONOMIC CHANGES

*Editor, Public Forum:*

Today the age old and venerable profession is confronted by myriads of problems and changes in economics. Many physicians are now faced with a new trend in economic pressure that has been brought about by the telephone, automobile, radio and the industrial age with complicated machinery. The world-wide depression has so wounded the standard of living of the doctor that it will take many years to heal.

Some of the existing conditions which have undermined the doctor's income at present are as follows: Private business corporations use as their keyword to the doctor, when solicited, that their products are only advertised to the practicing physician. After the commercial products have been popularized through the medical man's prescriptions, the promises of these money-making corporations are forgotten. Subsequently, these companies begin advertising campaigns over

the radios and, by a series of advertisements in all sorts of periodicals, never forget to mention that the medical profession encourages its use. The city physician has developed a poor habit of writing patent medicines because it helps him to save time by not having to calculate the dosage of all the ingredients. Patients, however, rapidly lose confidence in such practices and soon they learn to ask for such medications over the counter of the drug store. Then we have the unscrupulous advertisers over the radios through which channels much incorrect information is given to the public by quacks who either run their own clinics or are highly paid by commercial enterprises.

The physician, as a rule volunteers without charge to treat deserving poor patients in dispensaries, but the hospitals, however, do not have adequate social service assistance to investigate those who do not deserve charity. Nevertheless, there is unfairness on the part of a good number of hospitals in not protecting the physician's economic status.

At times the medical profession is exploited by several small private incompetent health insurance companies which work on a basis of profit. The companies of varied sources offer doctors very small annual fees and in return large numbers of families are attended by the overworked and underpaid poor physician who usually does very inferior type of work because of the tremendous amount of petty responsibilities. Also, there are numerous societies, lodges and endless benevolent and fraternal organizations which work on the very same principles and the helpless doctors fall for such insignificant tactics. There are numerous other causes which limited space does not permit the writer to mention at this time.

There are various groups and cults taking advantage of the doctors' lack of interest in the welfare of the medical profession, and so these strings of cults are constantly exploiting humans in their misery for their financial gain. The medical societies are weak without the individual physician's interest and understanding as there must be concerted effort on the part of the medical profession to help solve these problems rather than allow those who are out of the profession to dictate what ought to be done.

Since there is an approach to an oversupply of physicians in this country, there should be proposed a moratorium by the American medical schools which will aid in the equalization of distribution of physicians. Dispensaries should be put out of business if they are of a commercial nature; which can be done by having a state law passed prohibiting commercial dispensaries from making a charge to use clinics or medicines. A specialist or general practitioner should never use patent medicines for prescribing. There are too many age-old, useful drugs in the materia medica and pharmacology textbooks; students now at medical schools should be admonished against the evil practice of patent drugs. The druggists and the physicians should have mutual understandings and never infringe upon each others' fields. Cheap contract lodge practice, either on a small or large scale, is a pernicious

destructive economic force and should not be tolerated by medical societies. In short, the art of medicine has been constructed on basic principles of truth for which men in the past century have fought valiantly. We, too, must try and uphold those very fine principles and ethics which help to make our profession stand out characteristically from all the rest.

M MARTYN KAFKA, M.D.

Reprinted from N. Y. Med. Week, March 3, 1934.

### NEWS ITEMS

The Burke, Jenkins, Screven Counties Medical Societies met at Millen on October 4th. The scientific program consisted of a symposium on anemia. Dr. R. G. Brown, Garfield, read a paper entitled, *Pernicious Anemia*; Dr. Q. A. Mulkey, Millen, *The Symptoms and Treatment of Secondary Anemia*; Dr. Cleveland Thompson, Millen, *The Pathology and Etiology of the Secondary Anemias*.

The Georgia Medical Society, Savannah, met on October 6th. Dr. Chas. T. Brown, Guyton, read a paper entitled *Chronic Arthritis*; Dr. Julian K. Quattlebaum led the discussion. Dr. E. J. Whelan made a case report, *Multiple Abscesses of the Brain*. Refreshments were served.

The staff meeting of the Crawford W. Long Memorial Hospital, Atlanta, was held on October 11th. Case report, *Early Absorption of Sutures*, by Drs. M. P. Pentecost and Linton Smith; case report, *Duodenal Stenosis*, Dr. O. B. Bush. Dr. Wm. F. Lake made a report on the attendance at the Roentgenologist's recent meeting. Dinner was served in the dining room. Dr. Harold P. McDonald is President of the staff, and Dr. Chas. E. Lawrence, Secretary.

The Quarterly Clinic of the Ware County Hospital, Waycross, was held on October 9th and the program consolidated with that of the Eighth District Medical Society at its meeting held at the same time and place. The program of the Society consisted of: *The Unusual Necessity for Medical Organization at the Present Time*, by Dr. Clarence L. Ayers, Toccoa, President of the Association; *Chronic Malaria*, Dr. T. V. Willis, Brunswick; *Cure of Recurrent Ventral and Large Hernia by Oxymel Fascia Repair—Report of Cases*, M. J. Egan, Savannah; *Premature Infant*, Dr. Luther W. Holloway, Jacksonville, Fla.; *The Problem of Coronary Artery Disease*, Dr. James E. Paullin, Atlanta, President-Elect of the Association; *General Consideration of Gastric Pain*, Dr. W. W. Turner, Nashville. Dr. J. L. Campbell, Atlanta, Chairman of the Cancer Commission of the Association, held a clinic at the Ware County Hospital. He discussed different phases of the diagnosis of cancer as well as recognized methods of treatment.

The staff meeting of the Wesley Memorial Hospital, Emory University, was held on October 12th. The program consisted of: *Gastrostomy and Jejunostomy for Feeding*, by Dr. Frank K. Boland; *Acute Strychnine Poisoning*, Dr. H. H. Allen, Decatur. New Labora-

tory Procedures: *The Aschheim-Zondek Test*, *The Heterophile Antibody Reaction*, *Cecil's Method for Auto-genous Vaccines*, and *The Leukopenic Index*, by Dr. Roy R. Kracke and Dr. Francis P. Parker.

The Carroll County Medical Society met at the Carrollton Clinic, Carrollton, on September 21st.

Dr. P. H. Askew and Dr. W. W. Turner, both of Nashville, entertained the members of the Lowndes County Medical Society at a barbecue.

Dr. Chas E. Cunningham announces the opening of his office at 210 Masonic Temple, Decatur, for the practice of surgery, gynecology and obstetrics.

The staff meeting of Grady Hospital, Atlanta, was held on October 9th. Case reports on the program were as follows: *Arterio Venous Fistula—Diagnosis and Pathologic Physiology*, Dr. Dan C. Elkin; *Generalized Myelocytoma of Bone*, Dr. C. W. Strickler and Dr. Jack C. Norris; *Arsenical Poisoning-Encephalitis*, Dr. R. B. Wilson and Dr. T. I. Willingham; *Bilateral Empyema*, Dr. W. W. Anderson. Dr. Donald F. Cathcart, and Dr. Major F. Fowler.

The Southern Surgical Association will hold its next annual meeting at the Cloister Hotel, Sea Island Beach, December 11, 12, 13.

The Southern Tuberculosis Conference was held jointly with a meeting of the Southern Sanatorium Association at Knoxville, Tenn., October 9, 10, 11. Georgia doctors on the program were: Louis Rouglin, Champ H. Holmes, H. C. Schenck, A. Worth Hobby and C. C. Aven, all of Atlanta.

Dr. H. M. Tolleson announces the removal of his offices from Hahira to Eastman. He will be associated with Dr. Warren A. Coleman at the Coleman Sanatorium.

Assignments of Georgia doctors in the Medical Reserve Corps of the United States Army are as follows: Dr. Stacy C. Howell, Dr. E. A. Allen, Dr. George Hess, Dr. John D. Martin, Jr., all of Atlanta, assigned to the Two Hundred Twenty-Second General Hospital. Dr. J. M. Tribble, Senoia; Dr. Fred L. Webb, Macon; Leon D. Porch, Macon, assigned to the Ninetieth General Hospital. Dr. W. W. Jarrell, Thomasville; Dr. J. I. Palmer, Thomasville, were assigned to the Two Hundred Fourteenth General Hospital. Dr. F. C. Holden, formerly with the Medical Corps at Dahlonga, was re-assigned to Fort Oglethorpe Corps Area.

The Georgia Medical Society, Savannah, held its regular meeting on October 23rd. Dr. V. H. Bassett read a paper entitled, *The Doctors Kollock, with Notes on the Early Medical History of Savannah*; Dr. Lee Howard gave a case report entitled, *Report and Demonstration of Interesting Tumors*. Refreshments were served.



The second inscription to be engraved on the L. G. Hardman Silver Loving Cup is as follows:

"DOCTOR JAMES AUGUSTUS REDFEARN  
Albany, Georgia

for leadership in the first county-wide malaria control,

Eighty-Fifth Annual Session of  
THE MEDICAL ASSOCIATION OF GEORGIA

May 8-11, 1934  
Augusta, Georgia."

The Clinical Society of the New York Polyclinic Medical School and Hospital, New York City, held its regular meeting on October 1st. Dr. Joseph E. J. King, read a paper entitled, *Treatment of Brain Abscess—Lantern Slides*; Dr. Max Thorek, Chicago, *Advantages of Electrosurgical Obliteration of the Gall-bladder Over Classical Cholecystectomy—Motion Pictures*. The last meeting was held on November 5th. Dr. Damaso de Rivas, University of Pennsylvania, read a paper on *Amebic Dysentery*; Dr. Francis G. Blake, Yale University, *The Use of Artificial Pneumothorax in the Treatment of Lobar Pneumonia*; Col. C. W. Stiles, M.D., U. S. Army, Washington, D. C., *Medico-Zoological Aspects of the Race Problem*. Dr. Murray B. Gordon, Adjunct Professor of Pediatrics, will give a series of six lectures on *Endocrinology in Children*, beginning on November 13th.

Dr. H. G. Huey, Homerville, has been elected Chairman of the State Board of Medical Examiners.

The Science Club of the University of Georgia, Athens, held its first meeting on October 24th. Dr. Allen H. Bunce, Atlanta, was the first speaker and guest of the Pharmacy Department. He initiated the program for the year. His address will be followed by nationally known scientific men. The objectives for the year were announced by the Secretary-Treasurer of the Club as follows: "The four objectives of the Club are to encourage departmental competition, to popularize science, to encourage student attendance, and to make the scientific work of the University known and useful to Georgians." Dr. Bunce in his address stated that the Ellis health law was a colossal failure and that the present health set-up is inadequate. Instead of the present facilities for health work, he proposed a statewide program under direct control of the State Board of Health, a division of the state into health districts, and active cooperation of Georgia physicians, dentists and pharmacists. Dr. Bunce stressed the importance of health work in the smaller counties which are unable to support health units. In discussing diseases which can be controlled, he listed the costly malaria; typhus fever which is fast assuming proportions of a serious public health menace; diphtheria and tuberculosis which have higher death rates in Georgia than should be; the rapidly spreading amebic dysentery, hookworm and typhoid fever which can be eradicated by installation of proper sanitary facilities and their use; also the marked increase in venereal diseases which should be fought with education. Officers

of the Club elected were as follows: Drs. E. H. Dixon, President; J. H. Miller, Vice-President; T. H. Whitehead, Secretary-Treasurer.

## BOOK REVIEWS

*Laboratory Medicine, A Guide for Students and Practitioners*, by Daniel Nicholson, M.D., member of the Royal College of Physicians, London; Assistant Professor of Pathology, University of Manitoba; Assistant in Pathology, Winnipeg General Hospital. Second Edition, Thoroughly revised. Cloth. Price \$6.50. Pages 566 with 124 engravings and three colored plates. Lea and Febiger, Philadelphia, 1934.

This book carries out the idea of helping the student and clinician select and interpret such laboratory tests as are indicated in the various conditions met with in practice. The author condemns the policy of indiscriminate ordering of laboratory tests without regard to value of such tests to the given case. He rightly lists urine and blood examinations as the most important and useful of routine tests, pointing out the fact that these simple tests frequently reveal unsuspected conditions. The usual and proven laboratory methods are described clearly and simply. References are given for the more unusual and difficult tests. This book, by combining the usual laboratory methods with an interpretation of their meaning and indications, should prove invaluable to students and clinicians as an aid in the selection of useful laboratory tests.

GEORGE F. KLUGH, M.D.

*Clinical Aspects of the Electrocardiogram, Including the Cardiac Arrhythmias*. By Harold E. B. Pardee, M.D., Assistant Professor of Clinical Medicine, Cornell University Medical College; Associate Attending Physician, New York Hospital; Consulting Cardiologist, Lying-In Hospital and Woman's Hospital, New York City. Third edition, revised, with seventy-four illustrations and 295 pages. Published by Paul B. Hoeber, Inc., New York. Price \$5.50.

This book, the third edition of Dr. Pardee's pioneer work upon electrocardiography, has been revised and brought up-to-date in a thoroughly scientific manner. It was Dr. Pardee who re-directed attention to the Q-wave and the coincidence of large Q-waves in patients with coronary artery disease. Great controversy still exists in regard to the importance of a large Q-wave in lead three as a precursor or sequela in coronary diseases. Dr. Pardee is still conservative but believes that the finding of a large Q-3 in these cases is more than mere coincidence.

The S-T interval and the T-wave are fully discussed in a manner which will be clear to all. The S-T segment of the electrocardiogram has always been a fickle graph but at last it seems that we have been able to assign to it an important and dignified function in the series of events leading up to ischemia of the heart muscle whether caused by coronary disease or a diffuse myocarditis.

Very little is found in the book upon the utilization of a fourth lead in patients with latent coronary disease or myocardial damage in the heretofore silent areas of the heart. The fourth lead has proved to be a rather important addition to our methods of investigation of patients with coronary histories whose hearts show normal tracings when connected with only the three conventional leads.

Notwithstanding the above omission, Dr. Pardee's book is the most complete and instructive work upon electrocardiography which has come to my attention. The selected, well organized bibliography alone is worth the price asked for the book.

E. A. BANCKER, JR., M.D.

#### BOOKS RECEIVED

*A Text Book of Histology—Functional Significance of Cells and Intercellular Substances*, by E. V. Cowdry, Professor of Cytology, in the School of Medicine, Washington University, St. Louis, Missouri. Contains 503 pages—illustrated. Publishers: Lea & Febiger, Washington Square, Philadelphia, Pennsylvania. Price \$5.50.

*Nursing Schools Today and Tomorrow*. Final report of the Committee on Grading of Nursing Schools; William Darrach, M.D., Chairman, New York City; May Ayres Burgess, Ph.D., Director, New York City. Contains 268 pages. Nursing Information Bureau of the A. N. A., 50 West 50th Street, New York City. Price \$2.00.

*Applied Anatomy—The Construction of the Human Body Considered in Relation to its Functions, Diseases and Injuries*, by Gwilym G. Davis, M.D., Late Professor of Orthopedic Surgery and Associate Professor of Applied Anatomy in the University of Pennsylvania. Ninth edition, reset, reillustrated and completely revised by George R. Müller, M.D., Professor of Clinical Surgery, Graduate School of Medicine, University of Pennsylvania; Surgeon to the Misericordia and Lankenau Hospitals. Assisted by Bernard J. Alpers, M.D., Stirling W. Moorhead, M.D., Robert A. Kimbrough, M.D., I. S. Ravdidi, M.D., and S. Dana Weeder, M.D. Contains 717 pages. Six hundred and seventy-four illustrations, mostly from original dissections and many in colors by Edwin F. Faber. Publishers: J. B. Lippincott, Philadelphia.

*A Text Book of Pathology*. Edited by E. T. Bell, M.D., Professor of Pathology in the University of Minnesota, Minneapolis, Minn. Second edition, enlarged and thoroughly revised. Contains 767 pages with 364 illustrations. Publishers: Lea & Febiger, Philadelphia. Price \$8.50.

*Endocrine Medicine*, by William Engelbach, M.D., Professor of Clinical Medicine, St. Louis University School of Medicine, 1911-1924; Physician-in-Chief, St. John's Hospital, 1909-1924; Member of Staff St. Louis City, Jewish, Baptist Sanitarium, and Ma-

ternity Hospitals; President of Association for Study of Internal Secretions, 1922-1923; President of the St. Louis Medical Society, 1918; Fellow of the American Medical Association and American College of Physicians; Member Missouri, Illinois, New York, and Southern Medical Societies. With a foreword by Lewellys F. Barker, M.D., Professor Emeritus of Medicine, The Johns Hopkins University School of Medicine, Baltimore. Volume I contains 460 pages; Volume II contains 473 pages; Volume III contains 862 pages; Volume IV contains 117 pages. Publisher: Charles C. Thomas, Springfield, Ill.

*Institutional Care of Mental Patients in the United States*, by John Maurice Grimes, M.D., for four years a staff member of the Council on Medical Education and Hospitals of the American Medical Association. Publisher: John Maurice Grimes, M.D., 1816 North Clark Street, Chicago. Price \$3.00.

*Synopsis of Genitourinary Diseases*, by Austin I. Dodson, M.D., Richmond, Virginia, Professor of Genitourinary Surgery, Medical College of Virginia; Genitourinary Surgeon to the Hospital Division, Medical College of Virginia; Genitourinary Surgeon to Crippled Children's Hospital; Urologist to St. Elizabeth's Hospital; Urologist to St. Luke's Hospital and McGuire Clinic. Contains 275 pages with 111 illustrations. Publishers: The C. V. Mosby Company, 3523-25 Pine Boulevard, St. Louis, Missouri. Price \$3.00.

*Internal Medicine—Its Theory and Practice in Contributions by American Authors*. Edited by John H. Musser, M.D., Professor of Medicine in Tulane University of Louisiana School of Medicine; Senior Visiting Physician to the Charity Hospital, New Orleans, La. Second Edition, thoroughly revised—illustrated. Contains 1,288 pages. Publishers: Lea & Febiger, Washington Square, Philadelphia, Pa. Price \$10.00.

*Cataract—Its Etiology and Treatment*, by Clyde A. Clapp, M.D., Associate Professor of Ophthalmology, Johns Hopkins University; Professor of Ophthalmology, University of Maryland; Visiting Ophthalmologist, Johns Hopkins Hospital and Wilmer Institute; Ophthalmologist, University of Maryland Hospital. Contains 254 pages with ninety engraved illustrations. Publishers: Lea & Febiger, Washington Square, Philadelphia, Pa. Price \$4.00.

*Rules for Recovery From Pulmonary Tuberculosis—A Layman's Handbook of Treatment*, by Lawrason Brown, M.D., Saranac Lake, New York. Sixth Edition, thoroughly revised. Contains 275 pages. Publishers: Lea & Febiger, Washington Square, Philadelphia. Price \$1.75.

The names of 176,687 physicians are contained in the Thirteenth Edition of the American Medical Directory.



## OBITUARY

*Dr. William A. Ellison*, Augusta; Johns Hopkins University School of Medicine, Baltimore, Md., 1904; aged 53; died at his residence on the government reservation of Veterans Administration Facility, on September 22, 1934. He was born and reared in Milledgeville and received his early literary education there. During the World War he served in the U. S. army medical corps and was stationed at Camp Hancock and later served in the medical corps at many other places until six years ago, he was transferred to Lenwood Hospital, Augusta, where he worked as clinical director until his death. Surviving him are his widow, one son, George W. Ellison; one daughter, Sister Marian Immaculate Ellison. Funeral services were conducted from the funeral home of Elliott & Sons. Interment was in the city cemetery of Milledgeville.

*Dr. Jackson M. Nunez*, Swainsboro; member; University of Georgia Medical Department, 1886; aged 75; died at his residence after a long illness on October 10, 1934. He was born and reared in Emanuel county. Dr. Nunez practiced medicine for more than forty years until he retired a few years ago. He was also interested in farming. Many friends and acquaintances held him in high esteem. Surviving him are his widow, one stepdaughter, Miss Ethel Fairchild. Swainsboro; one son, Dr. M. F. Nunez, Milwaukee, Wis.; three daughters, Miss Virginia Nunez, Swainsboro; Mrs. Nevada Garrison, Commerce; and Mrs. Cuba Rutledge, Conway, S. C. Funeral services were conducted by Rev. Charles Jackson from the Swainsboro Methodist church. Burial was in the city cemetery.

### LILLY RESEARCH LABORATORIES FORMALLY OPENED

More than a thousand investigators and research workers were present at the formal opening of the new Lilly Research Laboratories at Indianapolis on October 11. The gathering of distinguished visitors representing many noted bodies and famous institutions in this and foreign countries as well, assembled in a mammoth tent erected for the occasion adjacent to the Lilly Laboratories.

At the formal opening exercises, in the afternoon, Eli Lilly, head of the Lilly organization, presided as chairman. Mr. J. K. Lilly, chairman of the board of directors, was introduced and responded briefly on "Research in Manufacturing Pharmacy" from the time of his entrance in the organization in 1876 up to the present, when there is so much evidence of the fact that medical science, in becoming an integral part of our social structure, has, in turn, become in a broad measure dependent upon industrial development.

Following Mr. Lilly's remarks, Dr. Irving Langmuir, director of research for the General Electric Company, discussed "The Unpredictable Results of Research." The speaker stressed the point that fundamental research should be pursued by industrial corporations regardless of any immediate possible commercial return therefrom. He gave an account of his

purely theoretical gas adsorption studies which ultimately led to the development by the General Electric Company of their present highly efficient electric light bulb.

The chairman then introduced Sir Frederick Banting, who talked on "The Early History of Insulin." He gave an account of the early experiments conducted by Dr. Best and himself which first demonstrated the existence of insulin, and expressed his great appreciation of the co-operation which he and his associates had received from the staff of the Lilly Research Laboratories in the development of a practical, large-scale procedure for the production of Insulin.

Sir Henry Dale, director of the National Institute for Medical Research, London, and secretary of the Royal Society, was the last speaker on the afternoon program. He chose as his topic "Chemical Ideas in Medicine and Biology." Sir Henry spoke of the immediate objectives of research in such laboratories as those of Eli Lilly and Company, and of their natural and proper differences from those of the laboratories supported by academic or public endowment. It was his thought, however, that the differences in result for the progress of medical science are often more formal than real. He expressed the hope that the growth of co-operation between those working in these different spheres might yet bring to many the rather rare privilege that had come to him of migrating from one to the other and back again, and thus of knowing at first hand the best that each can offer.

According to Sir Henry, the change that has taken place in the scope of pharmacy has a revolutionary aspect. He cited the fact that pharmacy not very many years ago was predominantly concerned with the traditional drugs that had come into use through empirical observation. Even though with the years had come new additions from time to time the therapeutic outlook and attitude had changed but little for centuries. He pointed out that a beginning had been made by pharmacology toward rationalizing the use of those drugs in common use which had an action sufficiently definite to be susceptible to experimental analysis. The attitude of the physician and that of the investigator, in the opinion of the speaker, was, however, one of skeptical pessimism.

He did not suggest that palliative treatment no longer existed in medical practice or that its complete elimination was expected or even desirable. He cited the fact that alleviation of symptoms not only brings the richest reward of gratitude but said that it might be the most urgent medical duty.

Sir Henry referred to the fact that he was speaking in the presence of Sir Frederick Banting and in the place where the large-scale production of Insulin had its earliest organization, and that he felt he need not remind his audience of the revolutionary change which has taken place in the treatment of a disease that only a few short years ago was the despair of the physicians.

"The transformation of the whole aspect of one

disease by the discovery of Insulin has attracted a more general attention," said the speaker, "than almost any other advance in medical science within our time." He was of the opinion that this discovery might be considered indicative of the wider progressive change in therapeutic method, based upon new knowledge of the causes of disease and aiming at the removal of those causes.

The speaker expressed the thought that looking at the change as a whole, one might distinguish two main contributory factors.

The *first* of these was the recognition of infections as due to the invasion of the body by living micro-organisms. It is a commonplace, he said, that preventive medicine was born of this discovery, that it gave a new direction to the therapeutics of infective diseases, in the search for remedies specifically killing or limiting the growth of the infecting micro-organisms or specifically neutralizing the poisons which they produce in the infected body. A few of the older remedies, indeed, according to the speaker, owed their value to an unconscious application of such specific actions for the control of infective organisms, which modern research has since identified: cinchona, ipecacuanha, mercury, and the iodides. Contrast with this, he said, the resources of modern therapeutics, with its range of antitoxins and bacterial products, and its growing list of new synthetic compounds discovered as the result of deliberate and organized search for substances which shall be harmless to the infected patient in doses which kill or prevent the multiplication of the infecting organism. Ehrlich, said the speaker, termed this new type of therapeutics "chemotherapy." A new and exacting chemical basis for these mysterious phenomena of immunity is even now being built, according to Sir Henry, the synthetic production of artificial specific remedies for infection which has, in the course of some twenty-five years, given us arsphenamine and other organic arsenical compounds such as tryparsamide; various derivatives of antimony; complex organic substances related to the dyestuffs on the one hand or to natural alkaloids on the other, and specifically effective against the trypanosomes of African sleeping sickness, or against the parasite of malaria, still the most deadly enemy to human life and health, if we view the world's peoples as a whole. We may properly class these synthetic substances, according to the speaker, with the antitoxins and other antibacterial substances, as artificial and natural agents for the removal from the body of harmful invaders from without.

A *second* principal factor in this change in therapeutic outlook may be found, said the speaker, in the recognition of diseases due to the lack of substances normally present in the body. Modern therapeutics, he said, can show no triumphs more brilliant than those which have followed the discovery of methods of preparing a number of glandular products in a state of sufficient purity to enable them, by artificial administration, to correct an abnormal deficiency. In the speaker's opinion, there can be no doubt that prep-

arations from these glands are destined to acquire an increasing range and success of application, as the methods for purifying and stabilizing their subtle principles are progressively improved, and as clinical science, thus able to apply them, recognizes more clearly the Administration because of misbranding under the Food conditions due to partial defects of their natural supply.

It is Sir Henry's thought that there is the second class of specifically acting substances, necessary like the hormones for healthy function and growth, but obtained by the body mainly from the food, and known to all the world as "vitamins." He related the story of Jacques Cartier and his expedition, when they landed in Canada four hundred years ago. Being attacked by scurvy, they learned from the native Indians to cure the condition with an infusion of the fresh sprouting tips of a species of fir tree. Nobody can guess how long the Canadian Indians had possessed this life-saving knowledge, just as those of the South American continent knew of the value of cinchona bark in fevers and of ipecacuanha in dysentery. This method of treating scurvy, said the speaker, passed out of the white man's memory for yet another two centuries. Sir Henry told how the Royal Society of London, when giving to James Cook the Copley Medal, based the award on his improvement of methods for preventing disease among sailors.

It would be possible, he said, to regard this remarkable change in therapeutic outlook and method simply as one phase in the general scientific development which has transformed a whole range of human activities in a generation. He felt that if we look for a particular rather than a general cause, we shall find it in the rapidity with which chemical knowledge and ideas have, in this same period, permeated the whole of medical and biological science. Biochemistry was referred to as having taken rank among the great divisions of science, and its influence, the thought, penetrated the whole range of the medical and biological sciences, while organic chemistry itself was showing a welcome tendency to recover its original objective, in studying the products and processes of living organisms.

The newer developments have but little relation to the art of the individual pharmacist whom our fathers knew, said the speaker, but we must resign ourselves, as in other spheres of human activity, to the loss of the individual art in exchange for scientifically organized production. In fact, he continued, in order to meet these novel, various, and expanding demands of modern therapeutics, pharmacy has become one of the most highly organized departments of scientific manufacture, covering an extraordinary range of expert knowledge and equipment. It now needs stables and pasturage, incubation rooms for large-scale culture of a wide variety of bacteria, and sterile rooms for manipulation of the products; chemical plant adapted to the difficult synthesis of complex and delicate compounds, or to the chemical and physical separation and purification of unstable natural principles, from animal organs only obtainable in adequate quantity and



freshness by the cooperation of highly organized abattoirs. He cited, in addition, a much more fundamental requirement, calling particular attention to the need for research undertaken in the spirit of free inquiry, often with no immediate practical aim or any probable result other than the increase of fundamental knowledge.

The speaker paid tribute to Eli Lilly and Company for their high rank among industrial organizations which have supported scientific research for its own sake and because they have known how to value the spirit which is engendered when scientific workers are given a wide freedom.

The afternoon speaking program was followed by an inspection of the new laboratories, the party being divided into small groups in the charge of guides.

In the evening a banquet was tendered the out-of-town guests. Mr. J. K. Lilly served as toastmaster and responses were made by Sir Henry Dale; Dr. Elliott P. Joslin, of Boston; Dr. George R. Hinot, of Boston; Dr. Frank R. Lillie, of Chicago; Dr. George H. Whipple, of Rochester, N. Y.; Dr. Carl Voegtlin, of Washington, D. C.; and Dr. G. H. A. Clowes, head of the Lilly Research Laboratories.

#### BOGUS "WARM SPRINGS CRYSTALS" RUN AFOUL FOOD AND DRUGS ACT

One man has been sentenced to a year in a Federal penitentiary and two others are awaiting trial on a charge of conspiring to violate the Federal Food and Drugs Act by advertising and selling "Warm Springs Crystal Compound" as coming from the springs by that name in Georgia, when as a matter of fact the "crystals" did not come from that source and were only a simple laxative, composed of Glauber's salts, similar in action to Epsom salts. The "crystals" cost only a few cents a pound and sold for a dollar a pound.

In their literature, their correspondence with agents, and especially in conversation with customers, the Warm Springs Crystal Company sought to use to commercial advantage the name Warm Springs. Salesmen were urged to point out the beneficial effects of the springs. The company and its "crystals" were disavowed in the beginning by the Warm Springs Foundation as having no connection with the springs other than that the office was set up in the same town.

When the "crystals" began to move into interstate commerce, members of the company were arrested and indicted by a grand jury. Quantities of the compound were seized at the instance of the Food and Drug and Drugs Act. Seizures were made at El Paso; Oklahoma City; Los Angeles; San Francisco; Louisville and Paducah, Ky.; Cincinnati; and Shreveport, La.

#### MEDICAL MEN FOR THINGS MEDICAL

"The principle that medical men should be the ones to exercise control over medical service is almost axiomatic. Yet there is confusion of thought where there could be straight thinking if all the facts were brought out and faced.

"There are those who would virtually make the physician an employee of the state. They fail to recognize the utter incompatibility between the American political system and the methods of truly professional men.

"There are those who complain about the scarcity of physicians. Yet it is a fact that while England has one doctor for 1,490 persons, France one for 1,690, and Sweden one for 2,890, there is in the United States one physician for every 780 persons.

"There are those who denounce our hospitals on the score of high charges for service, but the truth is that the cost per day of a hospital room with meals and the day and night personal ministrations required by an invalid is usually less than a well person would pay for mere room and meals in a first-class hotel.

"There are those who would like to let down the bars to self-medication. Yet the fact is that during the last few generations the average span of human life has been extended ten years, chiefly through the discoveries of medical science.

"Physicians know these things. They spend years acquiring an education on the care and repair of the most marvelous mechanism on earth—the human body. But they would readily admit that this education does not qualify them for telling railroad executives how to solve transportation problems or impressarios how to stage an opera. The work of the world needs many kinds of specialized knowledge, but certain it is that each field of work will be best managed by those who know it best"—from Mead Johnson & Company's announcement in Hygeia, August, 1934.

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# DYSMENORRHEA RELIEVED BY RESECTION OF PRESACRAL SYMPATHETIC NERVES

Alfred W. Adson and James C. Masson, Rochester, Minn. *A Journal A. M. A.*, March 31, 1934), report six cases of dysmenorrhea relieved by section of the presacral nerve by the operation described by Cotte in 1924. The group of cases reported is too small to permit general conclusions, but the results obtained are so satisfactory that it seems justifiable to the authors to employ the procedure for patients suffering from dysmenorrhea who cannot be relieved by medical measures such as endocrine therapy, the administration of tincture of belladonna, occasional doses of codeine, catharsis or hot douches at the onset of the menstrual periods.

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## BILATERAL RENAL AND URETERAL CALCULI\*

SPENCER A. KIRKLAND, M.D.

*Atlanta*

The writer has selected the subject of "Bilateral Renal and Ureteral Calculi" since one will find a patient with stones lodged in the pelvis of both kidneys. Another patient will present a picture with stones in one kidney and one in the ureter of the opposite side. Then, both right and left ureters will contain calculi at any area between the kidney pelvis and bladder.

Bilateral stones like unilateral ones have been studied for years. Kidney, ureteral and bladder stones have been referred to in the ancient Hindoo writings. Hippocrates recognized renal calculi and described renal colic. In the first century A. D. Celsus in his great work, "De Medicina," gave a description of an operation for the removal of vesical calculi. So clear and concise was his description of lithotomy that he won the name of "Medical Cicero" and his operative procedure was followed until about the sixteenth century. From Hippocrates' time to the nineteenth century the surgeons would consider cutting down on the kidney only when there was marked swelling in the loins. Few nephrotomies were performed during the middle ages, during the subsequent period a number of interesting cases were reported. Gustav Simon first performed a kidney operation in 1869, then followed Morris and Beck in 1880 and 1881, respectively. The first x-ray diagnosis of renal calculus was made by McIntire in 1896; it is reported that he made this x-ray after an exposure of twelve minutes and his x-ray findings were verified

by subsequent operation. Since the beginning of the nineteenth century considerable improvement has been made in the methods of diagnosis and treatment of renal and ureteral calculi. Urology has advanced within the last decade to such a point that, if one will take advantage of the recent laboratory and x-ray facilities, as well as the improved methods of diagnosis and treatment, the bulk of worries relative to ureteral and renal calculi will be eliminated.

It would be quite lengthy to go into and even briefly discuss the numerous theories relative to the etiology of calculi and the part that many claim is played by diet, climate, age, race, etc. The discussion on the diathesis theory would fill a book but if one will exclude the very rare cystine stone which is in a class by itself and generally conceded to be the result of diathesis, the conclusion will be made that lithiasis is not a familial disease. One should not lose sight of the fact that abnormalities in the ureters and kidneys predispose to calculi formation, such things as a posted or abnormally placed kidney or a kink in the ureter. These abnormal conditions may be brought about by some trauma or may be congenital. A horseshoe kidney is very prone to develop stones. In fact any abnormality in the ureters or kidneys which causes poor drainage from the kidney to the bladder will most certainly predispose to stone formation. In the writer's estimation, long continued illness plays a great part in the formation of calculi. When a patient is confined to bed over a long period, stones are invariably found in the kidneys. Fracture cases that remain in one position for several months often have an operation for stones after treatment of the fracture. Osteomyelitis cases are prone to develop stones. The writer has found a number of stones

\*Read before the Medical Association of Georgia, Augusta, May 10, 1934.

following war wounds where the wound was a gun shot fracture; also stones have been found following infected teeth and long continued illness of typhoid. These types of cases usually cause bilateral calculi. In my opinion, in bedridden patients, the position of the patient plays a great part in the formation of stones. When a patient is lying on his back the whole of the pelvo-calyx system of both kidneys is badly drained and it looks reasonable to suppose that such defective drainage would predispose to the formation of calculi. Stones are more prone to form in an infected area, but infection is not paramount as they form in non-infected areas. One might go on and on enumerating things which have been claimed to influence lithiasis, but after all, most of them are hypotheses. The conclusions reached, however, from the pros and cons of these theories furnish a fertile field for further research.

Bilateral calculi are of various sizes and shapes. One may find the small circular shot like stone; again one may encounter the cockle-burr oval type. Also there may be found irregularly shaped stones of various sizes and the stag horn shaped calculus which often fills the entire pelvis of the kidney. It is not always the largest stones that render the patient most uncomfortable. Very often a small stone lodged in the ureter will cause the patient to use more profanity than a large stone. Neither is it the stone that causes the most suffering that produces the most damage to the ureters and kidneys. Often silent stones will impair the function of the kidneys before the patient is aware of any renal or ureteral disease.

One practically always finds infection when stones are discovered on both sides of the higher genito-urinary tract. The most common organism found in the urine from calculous ureters and kidneys is the staphylococcus albus, and the next in order the bacillus coli. The staphylococcus may be found alone or in connection with the B. coli, the tubercle bacilli, or the pneumococcus. One may also find the pneumobacillus of Freidlander or the pneumococcus of Frankel. One important point in dealing with the bacteriology of infected stones is to decide

whether the urine from the infected kidney is acid or alkaline. An alkaline infection is considered much more dangerous, as the stone will become coated with phosphates, will grow more rapidly and is more prone to recur. This, of course, is not an infallible rule, one should make smears and examine cultures before definite conclusions are formed.

The symptoms vary for different stones of the kidneys and ureters. The same stones in different locations of the kidneys and ureters will present different symptoms. In other words, a large stone lodged in the kidneys will often not cause the patient near the discomfort that a very small stone lodged in the lower ureter will. If one finds pain in the loin over the kidney region, radiating downward to the thigh, scrotum or penis, the first thought is that the patient is suffering from calculi. The urine in calculous kidneys and ureters will usually show some blood cells. The blood is often found only on microscopical examination. The temperature varies from normal to a high degree. One patient may run 98.6 for a number of days and then 103 or 104 for several consecutive days. Some patients have hard chills, and where there is a blockage of the ureters and the patient has absorbed much toxin from severely infected calculous kidneys, one may get nausea and vomiting. Should bilateral calculi be left untreated, sooner or later one will find some destruction of the kidney function. Infection, which is practically always present in bilateral calculi, makes the prognosis worse and hastens the destruction of the kidneys. It is generally conceded that one rarely finds bilateral aseptic calculi. Out of thirteen cases reported at St. Peter's Hospital, all the infections were bilateral. In a series of thirty-six cases reported, thirty-one of these were infected on both sides. Usually the infection is in one kidney before the other. In other words, one infected kidney with a stone will infect the other and predispose to stone formation on the opposite side. It behooves one to make every effort to free a patient of the infection after ridding the patient of the stones.

The diagnostic worries have been curtailed considerably since the advent of the





Fig. 1. Bilateral renal colculi.



Fig. 2. Renal calculus left. Uteral calculus right.

modern cystoscope, the recent x-ray facilities and improved laboratory methods. In a case of anuria often the operative mortality increases daily and an early accurate diagnosis means so much to the operator as well as the patient. In this type of case one may find that it is brought about by ureteral calculi. It is of paramount importance to determine the part played by each kidney. Invariably one finds a kidney destroyed by an old standing calculous disease which shows a history of a renal ache in this affected side for a period of years. The opposite side has only recently and suddenly begun to ache. With the aid of the x-ray one may discover an impacted calculus in the ureter on one side and an old calculous renal destruction on the opposite side. With the cystoscope one may tease the stone out of the ureter by passing catheters and instilling sterile olive oil up this side. If these measures do not remove the stone, a stone dislodger may be used. Should one be unable to succeed in getting the stone out of the ureter through the cystoscope, his manipulations with catheter and dislodger will loosen the body and establish drainage from the kidney to bladder, which will lessen the danger of permanent damage to the kidney on this side. If the ureteral stone is

removed and the kidney function improved sufficiently, the opposite kidney can be operated on with less danger to the patient.

The treatment for bilateral calculi is usually operative. Small stones of kidneys and ureters have been removed through the cystoscope though. The writer has removed as many as six stones from one patient by this latter method. One will often notice marked improvement in the kidney function after the removal of the stones from the kidneys or ureters. Getting rid of the stones is just half of the battle, however. One should continue to treat the patient until the infection in the kidneys and ureters is entirely eliminated. This is easier said than done, but with persistence and patience on the part of both the doctor and patient, it may be accomplished. One aids in bringing this about by passing catheters up the ureters to establish good drainage from the kidneys to the bladder and instilling such antiseptics into the pelvis of the kidneys as mercurochrome, argyrol or silver nitrate. No chart can be compiled which will fit all kidney and ureter calculous cases. Every case is a law unto itself. The type of operation and treatment procedure will depend on the type of case with which one is dealing. Calculous affec-



Fig. 3. Bilateral renal calculi.



Fig. 4. Renal calculus right, Ureteral calculus left.

tions of the kidneys and ureters will cause anything from a mild pyelitis or ureteritis to a complete deterioration of the kidneys and ureters. A patient may live for a number of years with an infection of his kidneys and ureters and by the time the symptoms of renal failure have become apparent, it is oftentimes too late to remedy the condition. If necessary to sacrifice one kidney in order to save the other, this should be done. Often a man or a woman with only one kidney that is healthy is in a far better condition than one with a chronic infection on one side and a non-infected kidney on the other.

#### *Report of Cases*

Case 1. 1932—A woman, aged 40, complained of pains over back and loins. Urine showed pus 3 plus and x-ray films revealed bilateral renal calculi. A stone was removed from one side and the patient was allowed to go home to recuperate. About two months later a stone was removed from the opposite kidney. The patient was in good condition when she left the hospital. Unable to follow up the case and check up on her kidneys after the stones were removed.

Case 2. 1934—A man, aged 38, complained of recurrent attacks of renal colic, right, over a period of years, and recently began to have pains over the left loin radiating downward to the penis and scrotum. Urine showed pus 3 plus. Blood chemistry showed non-protein nitrogen, 47.6 mg., urea nitrogen, 21.6 mg. and creatinin, 2.2 mg. per 100 cc. blood. X-ray revealed renal calculus, left, and ureteral calculus, right.

Urine exudes from both orifices. Patient is unable to remain in the hospital at present for treatment.

Case 3. 1933—A man, aged 40, with hypertension, stated that for several years he had had pains over back and loins. Urine showed pus 3 plus. Blood chemistry findings were around normal. X-ray revealed bilateral renal calculi.

Case 4. 1933—An emaciated, weakened man, aged 41, for several years had had constant pains over back and loins. Urine showed pus 3 plus, presence of albumin and hyaline and granular casts. He has a duodenal ulcer. Blood chemistry done on Dec. 12, 1933, showed the non-protein nitrogen to be 127 mg. and creatinin 4.4 mg. per 100 cc. of blood. X-ray revealed a stone in the pelvis of the right kidney, also a calculus in the left ureter. The stone in the left ureter was teased out through the cystoscope and after the removal of this stone the patient began to feel better and was allowed to go home for a few weeks. He returned to the hospital about two months later. Blood chemistry done on March 27, 1934, showed the non-protein to be 37.5 mg. and the creatinin 2.0 mg per 100 cc. of blood. This patient has improved since the removal of the stone from his ureter, but as yet his physical condition will not warrant an operation for the renal calculus.

Case 5. 1932—H. L. H., a man, aged 40, complained chiefly of general weakness and constant pains in the back. Urine showed pus 3 plus. Culture of urine revealed the presence of B coli. There was impairment in the function of both kidneys. Blood chemistry showed non-protein nitrogen, 45 mg., urea nitrogen, 25 mg., creatinin, 2 mg., and sugar, 104 mg. per 100 cc. of blood. X-ray revealed bilateral renal calculi. The stone in the right kidney was



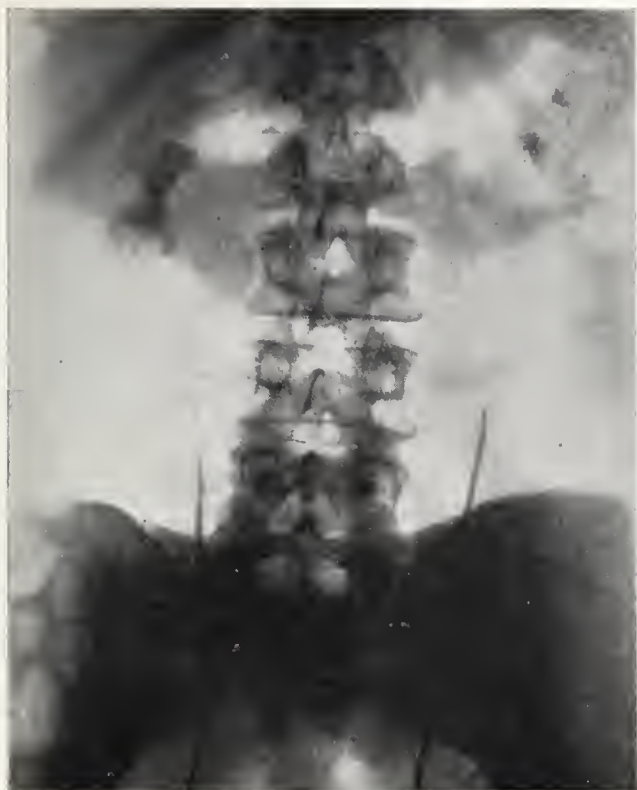


Fig. 5. Bilateral renal calculi.

removed and the patient was allowed to go home to recuperate from the operation. After about six months he returned to the hospital and the stone was removed from the left kidney. Lavage of the kidneys was performed at about weekly intervals after the second operative incision healed, alternating between 0.5 per cent silver nitrate and 5 per cent argyrol for the lavage. This was kept up weekly for two months and then the kidneys were lavaged every two months over a period of about two years. The kidney function improved considerably on both sides. The right kidney was cleared of pus; the specimen from the left kidney still shows a few white blood cells in the high power field. I am still treating the left kidney. The patient's physical condition is good.

### Conclusions

Early accurate diagnosis, which recent improved urologic facilities have made possible, will greatly lessen the operative mortality.

One practically never finds bilateral aseptic renal and ureteral calculi.

The surgeon's battle is only half completed after the removal of stones from the kidneys and ureters. One should continue the patient under observation and treatment, if possible, until the infection is cleared.

A patient with only one healthy kidney is often in far better condition than one with a chronically infected kidney on one side and a non-infected kidney on the other.

### Discussion on Paper by Dr. S. A. Kirkland

DR. W. L. CHAMPION (Atlanta): Dr. Kirkland has not only presented an interesting, but highly instructive paper on a subject of much concern to the general surgeon as well as the urologist.

The ancient history he gives is very interesting, and the predisposing cause of stone, such as abnormalities of the ureters or kidneys, and a long period of confinement to bed is worthy of note.

With the advancement made in urology within the past twenty-five years, with the equipment we have at present, there is no excuse for making an error in diagnosis.

In the case of bilateral calculi or stone in one kidney and a stone in the ureter on the opposite side we are equipped to determine which is the better from a functional point—whether either or both are infected, thereby determine which side to operate on first.

If we have a kidney containing pus and a stone in the ureter on the opposite side—if the ureteral stone is not producing anuria, the kidney containing pus should be operated on first, and later remove the stone from the ureter by dilatation or the dislodger.

My experience has been that practically all ureteral stones can be dislodged and caused to pass with the improved instruments we now possess.

A valuable point made by Dr. Kirkland is the importance of treating the patient after removing the stone until the infection has cleared up. This should be done whether the stone has been removed by the cutting operation or by delivery through the cystoscope.

Dr. Kirkland states one infected kidney with a stone will infect the other, and predispose to stone formation on the opposite side. I think this is undoubtedly true, and I am thoroughly convinced that foci of infection such as the tonsils and teeth, is the causative factor in the formation of stone, and is also responsible for the large number of cases of pus in the prostate gland.

DR. W. W. BATTEY (Augusta): I have enjoyed this splendid presentation by Dr. Kirkland. I feel a hesitancy in discussing a frankly urologic subject, when I see the distinguished urologists of the state here, but nevertheless I should like to add to his collection of cases an interesting one on which I operated about twenty years ago, a case of bilateral ureteral calculi in a young woman 20 years of age who was admitted to the hospital suffering from anuria.

Both stones were located in the lower ureters, at a point on a line with the spine of the ischium, just at the point where the ureter makes a slight angulation to pass into the bladder.

I did a transabdominal operation, removing both stones at one sitting, by opening the broad ligament on each side, delivering the ureter and removing the stones. Both ureters were closed. A stab puncture was made in both groins, and a drainage tube inserted in both sides. The woman convalesced satisfactorily up until the tenth day. There was very little urinary

drainage from the left side. The ureters seemed to have closed perfectly. On the tenth day she developed a chill and that was followed by a high temperature, and she complained of considerable pain in the pelvis. Upon vaginal examination there was a decided bulging in the culdesac. I felt satisfied there had been considerable leakage of urine, and there was an abscess formation in the culdesac. I drained the culdesac, and there was quite a quantity of pus and foul urine in the culdesac. After that she made a satisfactory recovery.

Four months after operation, ureteral catheters were introduced, without any trouble at all, in order to determine the condition of both ureters.

Eight months after the operation she was brought in again with an acute abdomen. There was a large mass in the upper right quadrant, the temperature was 103. This mass was somewhat movable, and exquisitely tender. The question was whether or not it was a pyonephrosis as a result of a blocked ureter, or an enlarged gallbladder. Unfortunately, at that time we did not have cholecystography, so we were not able to determine anything by the x-ray. There was pus in the urine, which led me to believe that there might be a blockage on that side or probably an enlarged gallbladder, but the line of approach seemed best through the abdominal route. I opened the abdomen and to my surprise she had a gallbladder about the size of a fist, which contained about 300 stones. This gallbladder was removed and she made a satisfactory recovery and since then has had twins.

Just a word about renal calculi. Dr. Kirkland has brought out the information about the formation of stones. Stones form in the pelvis of the kidney, and in the calices as well as the kidney itself, and there is always a question, when operating on these cases of obstruction due to the presence of stone in the pelvic junction when the stone gets down at this particular point and produces an obstruction, bringing about a pyonephrosis, a considerable inflammation of the kidney, as well as a marked perirenal inflammation, whether or not it is advisable to leave this kidney after the removal of the stone from the pelvis of the kidney, or whether it would be advisable in the presence of considerable perirenal inflammation, where there has been a marked absorption of the perirenal fat, to do a nephrectomy. If the other kidney is normal, a nephrectomy can be done with a good result, but in cases with a tendency to stone formation, we cannot always be quite satisfied about the condition of the other kidney, at all times. So the question arises, what shall we do?

Hugh Cabot has made an exhaustive study of this type of kidney, and he has made the emphatic assertion that we cannot tell by the gross appearance of the kidney whether or not the kidney should be removed. It is remarkable, he stated, how these kidneys, as to their gross appearance, looked badly damaged, but the function will be restored after the removal of the obstructing agent, the stone, in the pelvis or the ureterol-pelvic junction.

DR. W. P. JORDAN (Columbus): In the discussion of multiple stones in one kidney or both kidneys, we have a realization of the fact that patients who have multiple stones are those who have a sympathetic dominance. That brings to us the fact that those patients are the ones who have a decrease in their vitamin A diet. We realize, if we study the situation of stones in patients throughout the world, that in those sections where there is an increase of vitamin A, there are less stones. We have no stones where the diet is chiefly syrup, meat, bread and a few vegetables, for instance with the Negroes in this part of the country. The sections of the world where there are the most kidney stones are Southern India, Mesopotamia and China. This country has perhaps less than any other civilized country in the world. We have avitaminosis A.

When I speak of sympathetic dominance, I do not mean we have to change them, but to bring them back to their normal autonomic health. That can be done by regulating their ordinary diet. We do appreciate the fact that we would select our proper diet if there were not so many factors in our life that make it very difficult. In the cases of some patients who have an increased number of stones, we have tried and are trying to regulate the diet. I have not lived long enough to tell you whether these patients are going to have more stones. It would take a good many years, and probably would be longer than my lifetime. I have operated on children with stones, and they may outlive me, but with adult people I may be able to present something. This is not original with me, however.

I particularly remember a man who had more stones than anyone else I have seen. He had a large stone in his bladder, multiple stones in his prostate gland. He was a red-faced Irishman, and his diet had been solely of the type that I mentioned as being detrimental.

As on the plates Dr. Kirkland showed, the patient had what was shown in the x-ray as a stone in the kidney. The operation was performed under spinal anesthesia, for a small stone, the ordinary fingernail size. It was causing obstruction at the ureteral juncture. There was nothing found except a few pieces of sand, which were held together by some material.

The matter was discussed with this patient at that time, and he was told that was all we could find. The patient got better, but it was nothing but a calcified gland in the kidney region.

Dr. Hooe of Washington made the statement that he operated on a kidney once and did not find a stone, and the patient sued him. This was done under spinal, and we showed the patient what we found, and were frank enough to tell him what we thought was a stone was a calcified gland behind the kidney.

DR. EARL FLOYD (Atlanta): I would like to ask Dr. Kirkland one question, and that is whether he has considered the possibility of hyperparathyroidism as a causative factor in the formation of bilateral renal



calculi in the cases he has reported? There has been some very interesting work done along this line.

Hyperparathyroidism is a term used to describe a condition due to an excess of the internal secretion of the parathyroid glands. The source of this over-supply is found to be a hyperplasia of these glands which is producing an excess of the internal secretion known as parathormone. These glands, by means of this internal secretion exercise a profound influence on the metabolism of calcium and phosphorus in the body. In these cases of hyperparathyroidism with an excess of secretion, there is a greatly increased amount of both calcium and phosphorus being excreted in the urine associated with the not infrequent formation of calcium and phosphatic stones. This type of stone, even after removal, has a tendency to recur. Since the calculous formation is due to a systemic disturbance, these stones tend to be recurrent, multiple and bilateral. Therefore stones, especially bilateral recurring ones, should always bring up the question of an underlying hyperparathyroidism, and all stone cases which are bilateral should have an examination of their blood calcium and phosphorus, and if an over amount is detected this should be remedied if possible to prevent the recurrence of the stones.

We have had in our practice a few cases of stone formation following suppurative fractures of bones, without paralysis, in which the stones rapidly developed within a period of two or three months from the time of the fracture. Our first idea was that these patients, being confined to bed, have poor drainage and some have to be catheterized, that this was probably the predisposing factor. In view of the recent literature on the subject we now feel that this is not true and the stasis plus infection does not account for these stones which are found in the urinary tract, but there must be some disturbance of the calcium metabolism in some cases and that the protective mechanism of the urine is disturbed.

DR. M. F. FOWLER (Atlanta): I wish to mention a few facts in connection with the technic of the removal of stones from the ureter and kidney by cystoscopic manipulation. It is my experience that the vast majority of stones can be removed by cystoscopic manipulation, provided the urologist's patience is greater than his urge for surgery. There is very little need for hasty surgery in dealing with calculi. The first effort should be to establish drainage. Get a catheter past the stone, on up to the pelvis of the kidney, and leave that catheter in place at least twenty-four hours to drain and to dilate, over-coming spasm of the ureter.

When the catheter is removed, leave 2 or 3 cc. of 1 or 2 per cent novocain solution in the pelvis of the kidney, and also some sterile oil, either olive oil or mineral oil. If difficulty is encountered in getting the catheter past the stone, by the frequent injection of a small amount of 2 per cent novocain, gently introduced through Whistle tip catheter against the stone, for ten or fifteen minutes, and by patient effort,

the catheter can in the majority of instances be slipped past the obstruction.

Also, in dealing with the remaining infection after the stone has passed, dilatation is the thing that accomplishes more than all the lavage in the world. If that ureter is dilated by passing a sufficiently large catheter, a 6, 8 or 10, or two 6's, and leaving them in place long enough for some absorption of scar tissue to take place, results will be obtained. When the stone descends to the lower portion, the lower two or three inches of the ureter, haste can be made by the use of two or three small catheters passed beyond the stone, and after leaving them for twenty-four hours inject a little novocain through one of them, and withdraw the catheters very slowly with a twisting motion.

If you are unsuccessful in that, employ the spiral stone dislodger, with the assistance of someone who will twist that dislodger when you say "twist" and stop when you say "stop."

DR. S. A. KIRKLAND (Closing): I wish to thank Dr. Champion for the discussion. I also agree with Dr. Battey that there are times we do not know what to do, whether to take a kidney out or to leave it, but I think with the improved methods of determining the function of each kidney, and other facilities which we have at hand now, one is able to make a quicker and better decision than a number of years ago.

In regard to Dr. Floyd's question, I have never made a study of hyperparathyroid gland cases, but I am glad he mentioned that, because I think it is a good field for some research work.

I also thank Dr. Jordan, and I agree with Dr. Fowler that a little patience and gentleness help considerably in removing through the cystoscope stones from the ureters and kidneys.

#### HONOR ROLL FOR 1934

1. Randolph County, Dr. G. Y. Moore\*, Cuthbert, December 12, 1933.
2. Macon County, Dr. Thomas M. Adams, Montezuma, January 13, 1934.
3. Henry County, Dr. H. C. Ellis, McDonough, January 18, 1934.
4. Hancock County, Dr. H. L. Earl, Sparta, February 17, 1934.
5. Wayne County, Dr. A. J. Gordon, Jesup, March 12, 1934.
6. Monroe County, Dr. G. H. Alexander, Forsyth, March 19, 1934.
7. Ware County, Dr. Kenneth McCullough, Waycross, March 19, 1934.
8. Turner County, Dr. J. H. Baxter, Ashburn, March 24, 1934.
9. Lamar County, Dr. J. M. Rogers, Barnesville, April 2, 1934.
10. Whitfield County, Dr. H. J. Ault, Dalton, July 28, 1934.
11. Cherokee County, Dr. Geo. C. Brooke, Canton, October 23, 1934.

\*Deceased.

CHEST CONDITIONS IN INFANTS  
AND CHILDREN\*

WM. WILLIS ANDERSON, M.D.

DON F. CATHCART, M.D.

*Atlanta*

In older children routine physical examination of the chest may be carried out as in adults. Examination of an infant's chest is best accomplished at the beginning of the physical examination, when he has not been disturbed by other procedures. Some infants will lie quietly on an examining table while others are examined more readily in the nurse's arms. Nearly all infants cry when the throat is inspected, so this is usually put off until the chest is examined and the abdomen is palpated. Better x-ray films can be obtained in this manner when the baby is quiet.

In the new born infant the antero-posterior and the transverse diameters of the chest are practically equal and remain so until the third year. Then the transverse diameter gradually becomes greater and increases steadily until adult life. The general contour of the infant's chest is cylindrical and does not assume the dome shape until about puberty. The thoracic walls of the infant's chest are for the most part cartilaginous, which accounts for greater elasticity.

The trachea and bronchi occupy a greater space and are relatively larger than in an adult's chest. The alveoli are smaller and the connective tissue stroma of the lungs more abundant. The respiration rate in infancy and childhood depends on many other factors than diseases of the lungs. During sleep respirations in the new born vary from 35 to 40 a minute, may be shallow, irregular, both as to the entire chest, and as to one side of the chest. At 2 years of age the rate is about 25 per minute, and from this age on until about 12 years of age the rate gradually decreases to the adult rate. During waking hours these rates are normally materially increased, and a very slight disturbance may tend to double them. In all types of pulmonary disease the respiratory rate in the in-

fant or child, as the case may be, is always more rapid than in the adult.

Diaphragmatic respiration is present in the new born and continues to be the main element until the seventh year at which time the costal element becomes more prominent. Regular rhythmic breathing is not present in the new born and does not become fully established until the end of the second year of life. Any disturbance in the rhythm of respiration during this first two-year period does not necessarily mean pulmonary disease, but after this time any irregularity should be held as significant.

*The Pneumonias*

The differentiation of the types of pneumonia is of vast importance in so far as treatment and prognosis are concerned. At times the differential diagnosis is most baffling, but an intensive study of each case with daily, thorough chest examination should help a great deal. Most authorities state that lobular or primary disseminated pneumonia is essentially the pneumonia of infancy. In this we cannot altogether agree if our statistics are to be relied upon. In our series of cases studied at the Emory University Division of Grady Hospital in Atlanta, it was found that lobar or primary localized pneumonia occurred in infants under three years of age in 60 per cent of the cases studied. In this series of cases lobular pneumonia as a clinical entity occurred very infrequently.

In lobar pneumonia the physical findings are usually late in appearance. This may be explained by the fact that the pathologic process usually starts at the periphery and extends inward to the hilum and it is not until the process reaches the hilum or a large bronchus that we are able to hear bronchial breathing which is so typical of lobar pneumonia or lung consolidation. Early in the disease we are often confused by the chest findings, but careful percussion and auscultation should give some idea as to the location and type of disease process present. Percussion usually reveals some impairment over the affected area and exaggerated resonance over the uninvolved areas of the lungs. Auscultation over the affected lobe gives a rather feeble respiratory sound and at times almost complete suppression is found. The

\*Read before the Chattahoochee Valley Medical and Surgical Association, Radium Springs, Albany, July 10, 1934.





1-A (6) C. L. Aspiration pneumonia. Soap chips.

respiratory sound heard over the unaffected lung is usually exaggerated even to the point of being mistaken for bronchial breathing and it is due to this finding that in many of our cases the pathology was reported by physical examination as being on one side while the x-ray showed the actual lesion on the other side.

We do not feel that all statistics are infallible and there is certainly a possibility of slight error in this series, but we do feel that lobar or primary localized pneumonia occurs more frequently in the younger infants than before realized. The bacteriology in lobar and lobular pneumonia is the same, but at present there seems to be no adequate explanation why a group of organisms should cause a localized inflammatory lesion in one instance and a widely disseminated lesion in another. Pathologically, the pneumonic lesion in the younger infants is in marked contrast to that found in older children.

On examining a cut section of lung from an older child it will be noted that the process is uniform throughout and that a particular stage, such as congestion, red or grey hepatization, is easily identified. In younger infants the disease process is not at all uniform and congestion, red and grey hepatization, may be found in the same area of consolidation. The sharp boundary which usually characterizes the adult or older child type pneumonia is not found in the younger children and areas of consolidation may be

[illegible]

2-A (7) C. L. Aspiration pneumonia. Soap chips.

noted interspersed with normal lung tissue. We feel that due to this patchy or irregular involvement which is found in the infants and younger children, many cases of simple lobar pneumonia have been diagnosed as lobular or primary disseminated pneumonia.

Due to the anatomical structure of the lung it is always difficult to state that pneumonia is caused by a single organism, but it is the general feeling that these infantile lobar pneumonias are caused by one of the pneumococci. It must be remembered, however, that the pyogenic organisms are occasionally responsible for the lesions of lobar pneumonia. One case in our series was very interesting in that the primary pneumonia was caused by the staphylococcus and this lesion apparently served as a focus from which developed empyema, septicemia, multiple abscesses, osteomyelitis of the skull and the second right metacarpal bone. This child was admitted to the Emory University Division of Grady Hospital with a lobar pneumonia of the right lower lobe and during his stay in the hospital developed an empyema which was drained on four occasions.

Pus from these drainages was cultured and a pure strain of gram positive staphylococcus was recovered on each occasion. He also developed multiple abscesses which were drained on several occasions and here again staphylococci were found in stain and culture. One blood culture was positive for the same organism. The osteomyelitis which developed at two different sites was treated successfully and the child was dismissed from the hospital in fairly good condition.

Another interesting atypical case in this series had as an etiologic factor the inhalation of soap powder. The lesion in this instance was confined to the upper portion of the right lower lobe and the child ran a typical pneumonia temperature curve for two weeks, the fever falling finally by lysis. Due to the fact that the child almost constantly had large amounts of thick mucus in his mouth and throat, postural drainage was instituted and this seemed to help a great deal in the final clearing up of the disease process.

#### *Pyopneumothorax and Pneumothorax*

The development of small pockets of air following the aspiration of empyemas in infants and children is not an uncommon finding, but the spontaneous development of pyopneumothorax is somewhat of a rarity. In practically all cases of pneumonia, in these small patients, which have come to autopsy, the presence of emphysematous blebs at the periphery of the uninvolved portions of the pneumonic lung have been noted and it is in all probability that rupture of one or more of these blebs at times gives rise to the presence of air in the pleural cavity. This process may occur with or without the presence of fluid.

The presence of small amounts of air in the pleural cavity often passes unnoticed and usually it is not until enough air collects to cause total or partial lung collapse that we become conscious of its existence. One of our cases illustrates this point very forcefully. This child was admitted to the hospital with bilateral otitis media and a suspected lobar pneumonia. Two days later the chest findings suddenly changed and an x-ray examination revealed partial collapse of the left lung and a fairly large collection of air in the left chest. The baby rapidly became worse and died four days after the collapse. Another x-ray taken a short time before death revealed a little more expansion than was found in the previous x-ray. At autopsy the collapsed lung was covered with dense, fibrinous adhesions which were very friable and easily stripped from the lung surface. It was felt that the air in the chest cavity was due to a ruptured bleb or peripheral abscess and that the fibrinous exudate resulted as an attempt to seal over this pathologic opening.

Spontaneous pneumothorax is a very uncommon finding in infants and children and

#### LOBAR PNEUMONIA IN NEGRO CHILDREN

Of 100 Negro children admitted in recent months to Grady (Emory Division) Hospital with pneumonia, 85 had lobar pneumonia and 15 had bronchopneumonia. Of the 85 negro children who had lobar pneumonia, the age incidence was:

Years	Number
0-1	23
1-2	19
2-3	18
3-4	7
4-5	6
5-6	1
6-7	7
7-8	3
8-9	5
9-10	1
10-11	3
11-12	2
Unknown	1
Total	85

Of 85 negro children observed with lobar pneumonia, excluding the deaths in this series, the duration of the disease, (a) from the history, (b) from actual observation, and (c) the combined total duration, was:

Days:	History:	Observation:	Total:
1	10	2	
2	24	11	
3	20	13	
4	11	11	3
5	13	13	5
6	4	12	5
7	1	1	13
8	2	3	16
9	1	1	7
10			5
11	1	1	1
12			2
13			4
14		1	1
20		1	1
21		1	1
34		1	
41	1		
61			1
Indefinite	10		10
Sent Home with Whooping Cough			2
Removed Against Advice			1
Unresolved		1	1

Complications occurring in 85 children with lobar pneumonia:

Otitis Media	13
Delayed Resolution	4
Whooping Cough	4
Infectious Diarrhea	3
Pleural Effusion	3
Acute Nephritis	2
Meningismus	2
Purulent Conjunctivitis	1
Septicemia (organism not stated)	1
Acute Cardiac Dilatation	1
Meinngococcic Meningitis	1
Rickets (marked)	1
Pyelitis	1
Asthma	1
Migrating Pneumonia	1
Empyema	1
Gangrene of Fingers	1

Localization of lobar pneumonia in the lobes of the lungs:

Right Upper	30
Right Lower	21
Right Middle	20
Left Lower	20
Left Upper	8

Occurring in more than one lobe at the same time:

Right Middle and Right Lower	4
Right Upper and Right Middle	3
Entire Right Lung	2



Right Middle and Left Upper .....	1
Right Upper and Left Upper .....	1
Migrating .....	1

## Termination:

Crisis .....	29
Lysis .....	40
Unresolved .....	3
Died .....	8
Unknown .....	4
Total .....	85
Mortality .....	10%

## Blood Examinations:

White Blood Cells	No. of Children	Polymorpho Leucocytes	No. of Patients
4,000- 8,000	3	30-40%	2
8,000-12,000	12	40-50%	1
12,000-16,000	15	50-60%	4
16,000-20,000	13	60-70%	4
20,000-24,000	11	70-80%	19
24,000-28,000	11	80-90%	35
28,000-32,000	3	90-100%	12
32,000-36,000	7		
40,000-44,000	1		
44,000-48,000	1		
48,000-52,000	1		
52,000-56,000	1		
Unknown	6		8
Total	85		85
Deaths within 24 hours	4		

the symptomatology is not nearly so clear cut as that found in adults. Tuberculosis as an etiologic factor is indeed rare as compared to the 3 per cent occurrence in pulmonary tuberculosis in adults. The most frequent causative factors in infancy and childhood are pertussis, acute pneumonia with empyema, chronic pneumonia and tracheotomy. One patient was admitted to the hospital with a lobar pneumonia in the right lower lobe. Eight days after admission the chest findings were those of pleural effusion in the right base. An exploratory thoracentesis was done and only air under pressure was released. X-ray examination revealed a partially collapsed right lung with no evidence of fluid. The heart was displaced to a moderate degree to the left. This child did not have any of the classical symptoms of collapsed lung and at no time was he in the least uncomfortable. Eighteen days after the finding of the pneumothorax the lung had fully expanded and physical findings and an x-ray examination were negative.

## SCIENTIFIC EXHIBIT—A. M. A.

Application blanks are now available for space in the Scientific Exhibit at the Atlantic City Session of the American Medical Association, June 10-14, 1935. The Committee on Scientific Exhibit requires that all applicants fill out the regular application form and requests that this be done as early as convenient. Applications close February 25, 1935.

Persons desiring application blanks should address a request to the Director, Scientific Exhibit, American Medical Association, 535 North Dearborn Street, Chicago, Illinois.

## A CHILD WEIGHING TWENTY-FIVE POUNDS AT BIRTH

Dr. David P. Belcher, Pelham, forwarded to the Journal office a copy of reprint from the Journal of the American Medical Association, September 23, 1916, Vol LXVII, p. 950, entitled "A Child Weighing Twenty-Five Pounds at Birth." The case report follows:

"Mrs. R. W. C., aged 35, height 5 feet 7 inches, weight 220 pounds; circumference at hips 50 inches, multipara, delivered Feb. 22, 1916, has had eight normal children, including a twin birth. These children have averaged from 7 to 9 pounds in weight. She had three miscarriages. April 15, 1915, she aborted after about a six weeks' gestation. Soon after she became pregnant again. Early nausea and vomiting were more marked than in the previous pregnancies. Labor began Feb. 11, 1916. Vaginal examination at 8 p.m. during the first stage showed left occipito-anterior presentation. The os was patulous, and permitted the introduction of three fingers. The labor pains were of normal frequency but short. After an hour, the os admitted four fingers, and the pains were still short. The patient was given 5 minims of pituitary extract; the pains became more severe, but had little effect on the passage of the head. In two hours the 5 minims of pituitary extract were repeated; the pains now became strong. The os was normally dilating, but there was still slight progress of the head. At 2 a.m., after a consultation with Dr. A. S. Hargrove the patient received a third dose of pituitary extract of 15 minims. At 3:30 a.m., the head was born. The posterior shoulder was delivered with great difficulty. Much greater difficulty, however, was experienced in delivering the anterior shoulder; but with the added assistance of Dr. A. T. Stevens, this was finally rotated posteriorly, and accomplished. It required the combined efforts of the three physicians to deliver the remainder of the body. The child was a girl, weighing 25 pounds; it measured 12 inches across the shoulders, 28 inches in length and was perfectly formed. It was born dead. On examination of the mother, the perineum was found slightly lacerated. This was completely repaired by three sutures. Chloroform anesthesia was used. She made an uneventful recovery.

Part of the comment by the editor of the J. A. M. A. follows: "This case is remarkable as it was a girl child and the maternal measurements, as given, taken after delivery, were not abnormal save for circumference at the hips, which is rather large. The author states that the baby was perfectly formed; therefore, we may assume its head was relatively large, yet it was born without mechanical assistance and caused but slight perineal laceration."

**THE JOURNAL**

OF THE

**MEDICAL ASSOCIATION OF GEORGIA**

Devoted to Welfare of Medical Association of Georgia

139 Forrest Avenue, N.E., Atlanta, Ga.

DECEMBER, 1934

**THE SEASON'S GREETINGS**

*A Merry Christmas and a Happy and Prosperous New Year is our prayer for all members of the Medical Association of Georgia and their families.*

**RECENT MEDICAL MEETINGS**

The physicians of Georgia and the Southeast have been particularly fortunate in having the opportunity of listening to many of the nation's most able physicians and surgeons during the past few weeks.

The Southern Surgical Association has just held one of its most successful meetings at Sea Island under the able leadership of Dr. Frank K. Boland as President. The papers and discussions were given by the leaders in American Surgery. Those who attended were fortunate indeed. Those who could not attend will be repaid by a careful study of the papers presented.

The Southeastern Branch of the American Urological Association has just completed its first and organization meeting in Atlanta. Many of America's leading urologists gave lectures and demonstrations. At this meeting there were received ninety new members, making a total membership of one hundred and sixty-seven. Dr. Montague L. Boyd, the President, extended an invitation to all the physicians in this section and more than three hundred were in attendance. There were more than two hundred guests at the annual banquet which was arranged by Dr. M. K. Bailey, Chairman of the Entertainment Committee and which was presided over by Dr. George Livermore, a past president of the American Urological Association, who acted as toastmaster. Dr. Edgar G. Ballenger was elected President for 1935; Dr. H. W. E. Walther of New Orleans, President-elect; Dr. Earl Floyd reelected as Secretary-Treasurer and Dr. Stephen T. Brown as Executive Committeeman. The next meeting will be held in Nashville, Tennessee.

The Georgia Pediatric Society held its second annual scientific meeting in Atlanta, December thirteenth. The guest speakers were Dr. Gilbert J. Levy, of Memphis; Dr. Robert A. Strong, of New Orleans; Dr. Wilburt C. Davison, of Durham; Dr. A. Grame

Mitchell, of Cincinnati, and Dr. Edwards A. Park, of Baltimore.

The meetings were conducted by Dr. Benjamin Bashinski of Macon, President of the society. Many visitors from Georgia and adjoining states were present. Dr. W. W. Anderson of Atlanta became the new President, having been elected President-elect last year.

**RANDOLPH AND HABERSHAM COUNTIES**

The Randolph County Medical Society again heads the honor roll of paid up members for 1935. For many years, Dr. G. Y. Moore, Cuthbert, was Secretary-Treasurer of the Society, and in some years for several months preceding the subsequent year, would make remittance for dues of every eligible member of the society thereby keeping the society at the head of the honor roll over a period of years. This year Dr. W. G. Elliott, Cuthbert, made remittance for dues of all members for next year on December 7th.

Dr. O. N. Harden, Cornelia, Secretary-Treasurer of the Habersham County Medical Society, reported the dues of all members of the society paid on December 19th. This gives the society second place on the honor roll for 1935.

*The JOURNAL would like to record the scientific work of Georgia doctors. It earnestly requests, therefore, that each physician in the State who publishes a contribution in some other medical periodical submit an abstract of the article for these columns.*

**DIRECTORY**

As for a number of years past, this, the December issue of the Journal, contains the directory for the year 1934. The names and addresses are listed under their respective societies. The roster of members and officers are published from reports by the secretaries of county societies. If errors or omissions are noted the Secretary-Treasurer will appreciate a prompt notice to that effect.

**THE PINK SLIP**

For your convenience we are enclosing in this issue of the Journal a pink slip that we ask you to fill out promptly in payment of 1935 dues and forward to the Secretary of your county society.

**HONOR ROLL FOR 1935**

1. Randolph County, Dr. W. G. Elliott, Cuthbert, December 7, 1934.
2. Habersham County, Dr. O. N. Harden, Cornelia, December 19, 1934.



## WOMAN'S AUXILIARY

### OFFICERS

President—Mrs. J. E. Penland, Waycross.

President-Elect—Mrs. E. R. Harris, Winder.

First Vice-President—Mrs. Ralph H. Chaney, Augusta.

Second Vice-President—Mrs. J. M. Barnett, Albany.

Third Vice-President—Mrs. G. Hugo Johnson, Savannah.

Recording Secretary—Mrs. Warren A. Coleman, Eastman.

Corresponding Secretary—Mrs. B. H. Minchew, Waycross.

Treasurer—Mrs. Chas. H. Richardson, Macon.

Parliamentarian—Mrs. Mather M. McCord, Rome.

Historian—Mrs. M. F. Haygood, Alto.

Chairman Public Relations—Mrs. Evert A. Bancker, Jr., Atlanta.

Chairman Press and Publicity—Mrs. J. Bonar White, Atlanta.

Chairman Legislation—Mrs. Dan Y. Sage, Atlanta.

### HYGEIA

In the capacity of a newly appointed Hygeia Chairman of Georgia, I am very anxious to get co-operation in promoting wider distribution of this most interesting and instructive magazine, which should be in every home. Let us give enthusiastic support to our National President, Mrs. Robt. W. Tomlinson, and to Mrs. Penland in acquiring our quota, 155 subscriptions.

Today, as of yesterday, the Hygeia holds the first place in my esteem among all American publications which claim to be national medical news for the home and public. It summarizes and reviews important advances in health problems, offers suggestions that are dependable, and is always admirable in spirit and in tone, as well as in fullness with which it presents the health news that adds to knowledge for the betterment of health and prevention of disease.

Hygeia has and is rendering a notable service and those of us familiar with its pages are best prepared to give expression to its wonderful possibilities for the betterment of health in the home. Its educational offering lends itself to a better field for the practice of medicine now and tomorrow.

In promoting or suggesting plans for a Hygeia campaign for increasing circulation of this health magazine, it seems to me that if speakers should be designated to call the attention of civic clubs, P.-T. A., boards of education and similar bodies interested in advancing health, the manifest benefits of Hygeia as the instrument of the A. M. A. for the public health, then in turn Chairmen of Hygeia in all Auxiliaries, could follow this pre-message to the public with ease and haste, which is necessary for a successful drive in securing our quota as given by the A. M. A.

Its policies, its value, its advantages, its necessities can be driven home, if leadership is shown on the part of active members of the Medical Association of Georgia. We are not asking the doctors to do the work, but

to lend leadership, which will give us the assured success necessary to obtain the end.

MRS. JAMES M. BARNETT,  
*Hygeia Chairman.*

### GEORGIA MEDICAL SOCIETY AUXILIARY

The Auxiliary to the Georgia Medical Society, at its November meeting, made arrangements to attend the Thanksgiving Tea and Pantry Shower of the Sunshine Unit of the T. B. Association; to contribute canned goods through individual members and to assist Mrs. Lee Howard, Chairman of the Savannah-Chatham County T. B. Seal Sale in December.

Seventy-five dollars have been sent to the Chairman of Student Loan Fund, Mrs. Benj. Bashinski, as a result of a card party with Mrs. E. M. Baker, Chariman.

The State President's letter was read, the objectives for the year discussed and copies distributed. Mrs. J. C. Metts gave a health talk and all committees recommended were appointed.

Requests are coming to the Auxiliary for speakers and members are responding, as well as obtaining some from the Medical Society. Over twenty-six offices and chairmanships are now held by Auxiliary members. Mrs. G. Hugo Johnson, President, has been elected President of the Savannah Port Society and Mrs. J. S. Howkins is President of the Savannah Federated Clubs. We wish we had space to list all, for they cover every organization interested in health and public welfare in Chatham County.

### WARE COUNTY MEDICAL AUXILIARY

Ware County Auxiliary Reports, "Our meetings are well attended and have preserved that fine feeling of fellowship which the Auxiliary was designed to promote." It is busy with its Student Loan Fund, in answer to a request for an early response. Plans have been made for Mother Welfare pro-

grams to all P.-T. Associations by members of the Ware County Medical Society and a committee of four has been appointed to select subjects appropriate for several schools. The Auxiliary has been asked to appoint a member to address high school girls on personal and social hygiene, and Mrs. C. M. Stephens, who has given such talks successfully, has accepted. Many offices and chairmanships are held by Auxiliary members, but the names and officers have not been sent in. Mrs. R. L. Johnson is President.

Since 1930, the Auxiliary has presented a silver loving cup annually to the grammar school showing the lowest percentage of remediable physical defects. This year the Quarterman Street School of Waycross received the cup, with a percentage of 20.7. Ten years ago, the percentage was as high as 80 per cent. This tells the progress of prevention in a few words.

#### FULTON COUNTY

In 1930, when the Fulton County Medical Society was discussing the possibility of a new Academy of Medicine, the Auxiliary decided on an Investment Fund of not less than five years, to be used in furnishing a room for Auxiliary meetings when such an Academy would be built. Now, the grounds are paid for by the doctors and the Auxiliary has \$853 in a bank, separate from other funds.

Mrs. H. H. Askew, President of the Auxiliary, has prepared this program for 1934-1935.

September—President's Letter. Objectives of the year. Status of Mother Welfare in Georgia.

October—Medicinal Plants of Georgia Indians.

November—Proper Lighting. Sight Conservation. Distribution of State Auxiliary Health Material.

December—The Story of the Christmas Seal—and the Menace of Tuberculosis, Exhibit of T. B. material from the Atlanta and Georgia T. B. Associations. Cosmetic Facts and Fallacies.

January—Medical Legislation. Aims of Medical Association of Georgia during the next session of the State Legislature. Good Citizenship and why Auxiliary members should vote.

February—The History of Medicine as Related to Motherhood.

March—The Contribution Chemists Have Made to Health.

April—Quackery and the Auxiliary's place in refuting and abolishing it.

May—A study of the medical laws of Georgia and the work of the State Board of Health.

#### *Semi-Annual State Report*

Georgia has 31 Auxiliaries and four memberships at large, representing 51 counties. The Auxiliary is guided by an Advisory Board of five members, appointed by the President of the Medical Association of Georgia. We have all the committees recommended by the American Medical Association Auxiliary and an active health film and student loan committee, the later limited to families of physicians.

Through our local units the Auxiliary has promoted various types of health work, including: public relations meetings, showed health films, assisted in dental, tubercular, blind-prevention clinics; assisted in Summer Round-Up of P.-T. Associations; organized home hygiene classes in Red Cross; placed Hygeia before the laity; carried health messages to organizations in all sections of Georgia; helped secure health nurses by sale of Christmas seals.

The President of the Medical Association of Georgia, the Advisory Board, the Commissioner of Health, State Department of Public Health, met with the Executive Board of the Auxiliary in June and planned the educational program, which again included Mother Welfare—the necessity of pre-natal, natal, post-natal care, reporting of births; cancer of the breast and uterus; stomach; also personal, community and social hygiene, and interpretation of the profession to the public.

Permission was given to mimeograph copies of fifteen health talks of about three minutes each, and twenty thousand pamphlets on Mother Welfare were printed. Fifteen thousand cancer leaflets are a gift from the Cancer Commission of Georgia. These are distributed after the meetings where Mother Welfare is the subject and in rural sections where any health work is being done.

This program was approved as part of the cooperative health work of the Auxiliary and the Georgia Congress of P.-T. A., the Georgia Federation of Woman's Clubs, Georgia Business and Professional Women, Georgia League of Women Voters, Director of Parental Education of the University of Georgia; the Georgia Public Health Nurses, the Red Cross and others. Letters of explanation were sent all local P.-T. A. Associations and the health and welfare chairmen and presidents of clubs in all sections. Some superintendents have asked for sets for each principal in their schools; the talks to be posted one a month.

Every chairman is *active* and the work is growing each year. During the summer, the Auxiliaries were given the opportunity of

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## GEORGIA DEPARTMENT OF PUBLIC HEALTH

T. F. ABERCROMBIE, M.D., *Director*EFFICIENCY OF THE NEW  
TYPHOID VACCINE

Two years ago the State Department of Health Laboratories made certain changes in the preparation of typhoid vaccine. The most important change was the substitution of a recently isolated "smooth Colony" strain of *B. typhosus* (*E. typhi*) as the source of antigen in place of the old "rough" Rawlins strain which has been used almost universally for the past thirty years.

The occasion for the adoption of a new antigen was brought about by the following factors:

1. An increasing number of reports of failure of the Rawlins strain vaccine to protect.
2. The announcement of certain investigators (Grinnell, Arkwright, Larkum, et al) that most Rawlins strains were "rough" and therefore degenerate and incapable of producing adequate protection against "smooth" strain infections.

For several years prior to the adoption of the new antigen reports were received from various health officers and physicians of the occurrence of typhoid fever in persons who had been inoculated within one year prior to onset. Nine such cases were voluntarily reported in 1929, eighteen in 1930 and eleven in 1931. Considering the fact that from 200,000 to 250,000 people were vaccinated during each of these three years, these small figures of themselves did not seem unreasonable. However, in certain instances several members of a given family who had been inoculated would all develop typhoid in such manner as would indicate vaccine deficiency. For example, in May, 1929, the father of a large family living in a south Georgia county developed typhoid fever. All members of this family received three injections each of vaccine prepared with the old Rawlins strain of typhoid as soon as possible after the father's case was diagnosed. About ten days after the third injection three of the family developed typhoid, another came down in three weeks, another in nine weeks, another in ten weeks and the last one in fourteen weeks. Thus a total of seven persons in this family developed typhoid after completing vaccination. In another instance four members of another family developed typhoid in from four to eight weeks after being vaccinated.

Then in 1932 Dr. D. L. Seckinger of our staff investigated 216 cases of typhoid occurring in various places in the state. Of this

number he found 21, or 9.7 per cent who had received typhoid vaccine within twelve months prior to onset. Five of the group of twenty-one cases died. Such a high mortality (23.8 per cent) is contrary to the established belief that vaccine at least mitigates the course of the infection even if it fails to protect.

Early in 1932 Dr. W. W. Brown, Health Officer of Clarke County, reported that during the preceding year several recently vaccinated persons had developed typhoid. He requested that we prepare for him a special vaccine using as antigen cultures obtained from the blood stream of these cases. This was done and we soon learned as a result of its use that we had nothing to fear, there being no appreciable increase in physiological reaction or toxicity. We then selected as our new antigen a local strain of *B. typhosus* which answered all requirements and abandoned the Rawlins strain entirely. All typhoid vaccine supplied after January 1, 1933, was made with the new strain.

During the latter part of 1933 a study was made of 650 cases of typhoid reported in 1933. Of this number only four had received the new vaccine. At the present writing 550 of the 1934 cases have been similarly studied, showing only two who had been inoculated within twelve months prior to onset with the new vaccine. Compare these 1200 cases with only six failures, or 0.5 per cent with 216 cases studied in 1932 with 21, or 9.7 per cent failures. It is obvious at least that the incidence of vaccine failures has been markedly decreased since the new antigen was adopted.

More recent laboratory studies made in this country and in Europe indicate that the old Rawlins strain is not necessarily degenerate and that under conditions it is still as efficient as recently isolated smooth strains. The announcement of these studies has precipitated a spirited but nevertheless wholesome controversy, the outcome of which is being watched with great interest. After all, we may have been dealing with a great variety of substrains of the original mother culture, some of which are decadent and others retaining good antigenic characters.

Be that as it may, the writer is inclined to believe that the substrains of the Rawlins culture previously used in this laboratory must have been decadent. At any rate, since the adoption of a freshly isolated smooth strain the incidence of vaccine failure has been reduced to a very low minimum.

## NEWS ITEMS

The Randolph County Medical Society met at the Patterson Hospital, Cuthbert, November 1st. Dr. H. C. Schenck, State Board of Health, Atlanta, gave a lecture on *Tuberculosis*.

Dr. Hulett H. Askew, Atlanta, was elected to Fellowship in the American College of Surgeons at a recent meeting of the College's Clinical Congress held at Boston.

The Spalding County Medical Society met at the Strickland and Son Memorial Hospital, Griffin, on October 16th. Dr. M. M. Head, Zebulon, and Dr. Roger W. Dickson, Atlanta, read scientific papers.

Hospitals in Georgia which have been approved by the American College of Surgeons are as follows: ALBANY—Phoebe Putney Memorial Hospital; ATHENS—Athens General Hospital; ATLANTA—Crawford W. Long Memorial Hospital, Georgia Baptist Hospital, Grady Memorial Hospital, Henrietta Eggleston Hospital for Children, Piedmont Hospital, St. Joseph's Infirmary, Steiner Cancer Hospital, United States Penitentiary Hospital, Veterans' Administration Hospital; AUGUSTA—University Hospital, Veterans' Administration Facility Hospital, Wilhenford Hospital for Women and Children; COLUMBUS—Columbus City Hospital; DECATUR—Scottish Rite Hospital; EMORY UNIVERSITY—Emory University Hospital; GAINESVILLE—Downey Hospital; MACON—Macon Hospital, Middle Georgia Hospital, Oglethorpe Private Infirmary; MILLEN—Millen Hospital; PLAINS—Wise Sanitarium; ROME—Harbin Hospital, McCall Hospital; SAVANNAH—Central of Georgia Railway Hospital, Charity Hospital, United States Marine Hospital, Warren A. Candler Hospital; THOMASVILLE—John D. Archbold Memorial Hospital; VALDOSTA—Little-Griffin Private Hospital, Owens-Saunders Private Hospital; WARM SPRINGS—Georgia Warm Springs Foundation; WAYCROSS—Atlantic Coast Line Hospital, Ware County Hospital.

The city council of Atlanta passed an ordinance which has been approved by the mayor to require all handlers of foods and soft drinks in restaurants, cafes, cafeterias, stores, founts and other places to submit to health examinations semi-annually and to furnish health certificates by the examining physicians, otherwise such persons will be barred from such work or employment.

The Burke-Jenkins-Screven Medical Society met at Millen on November 1st. The scientific program consisted of a *Symposium on Gonorrhea*, by Dr. J. M. Byne and Dr. R. L. Miller, both of Waynesboro. Dr. Cleveland Thompson, Millen, reported a case of *Cardio Spasm*; Dr. T. B. Brantley, Hiltonia, a case of *Tetanus Developed from a Cancer*.

Dr. J. Victor Roule announces the opening of offices in 1207 Southern Finance Company Building, Augusta. Practice limited to diseases of the eye, ear, nose and throat.

The regular staff meeting of the Crawford W. Long Memorial Hospital, Atlanta, was held on November 8th. Dr. Shelley C. Davis reported a case, *Ruptured Gastric Ulcer with Ptosis*; Dr. L. P. Baker, Dr. E. G. Ballenger, Dr. O. F. Elder, Dr. H. P. McDonald and Dr. O. T. Malone, case of *Prostatic Abscess with Unusual Complications*.

The Third District Medical Association met at Cordele November 7th. Dr. John E. Walker, Columbus, read a paper entitled, *The Classification and Treatment of Anemia. Symposium on Cardiovascular Diseases*, Dr. John R. Rose, Unadilla, *Cardio Vascular Disease from Psychic and Neurogenous Causes*; Dr. Thos. E. Rogers, Macon, *The Treatment of Cardiac Decompensation and Edema*; Dr. Chas. H. Richardson, Macon, *The Cardiac Reserve in Surgery*; Dr. Jas. E. Paullin, Atlanta, *The Treatment of Cardiovascular Disease*. The discussion was led by Dr. Allen H. Bunce, Atlanta. Supper was served at the Country Club.

The Clinical Society of the Piedmont Hospital, Atlanta, met on November 12th. Dr. Floyd W. McRae and Dr. McGehee reported a case of *Pyloric Stenosis*; Dr. H. C. Sauls, case of *Uremia-Fatty Degeneration of the Liver*.

Dr. T. J. Collier, Atlanta, was elected President of the Associated Anesthetists of the United States and Canada at a recent meeting held at Boston.

The Fulton County Pediatric Society elected officers for the ensuing year as follows: Dr. Joseph Yampolsky, Atlanta, President; Dr. Donald F. Cathcart, Atlanta, Vice-President; Dr. T. I. Willingham, Atlanta, Secretary-Treasurer.

The Georgia Medical Society, Savannah, held its monthly meeting on November 13th. Dr. Robert Drane read a paper entitled, *Lymphosarcoma of the Stomach*; Dr. J. K. Quattlebaum opened the discussion. Dr. Quattlebaum reported a case, *Massive Resection of the Large and Small Intestines for Relief of Chronic Obstruction*.

Dr. L. M. Hawkins, Dr. G. T. Hendry, Dr. T. E. Oden and Dr. W. P. Williams, all of Blackshear, entertained the members of the Ware County Medical Society at the New Marion Hotel, Blackshear, on November 7th. Dr. W. P. Williams spoke on the necessity of finding some means to alleviate the anxiety, discontent and worry in the middle aged people.

The staff meeting of Grady Hospital, Atlanta, was held on November 13th. Dr. C. M. Hogan and Dr. C. W. Strickler presented a case for diagnosis; Dr.



H. L. Allan, Jr., Dr. Geo. H. Cochran and Dr. M. T. Meyers reported an Orthopedic Case; Dr. Chas. A. Eberhart, Dr. C. C. Garver and Dr. W. R. Glenn reported a mortality case, *Intestinal Obstruction*.

The staff meeting of the Wesley Memorial Hospital, Emory University, was held on November 9th. Dr. Jas. J. Clark, Atlanta, read a paper on the *Estimation of X-Ray Dosage by the Use of an R-Meter*.

The Jackson-Barrow Counties Medical Society met at the Harrison Hotel, Jefferson, on November 5th. Dr. W. T. Randolph, Winder, read a paper on "Amebic Dysentery". The next meeting of the Society will be held in Winder.

The University of Georgia Science Club met at the Georgian Hotel on November 23rd. Dr. Oliver Kamm, Director of Scientific Research, Parke, Davis & Company, Detroit, made two talks: the first, non-technical, "The Place of the Chemist in Public Health"; the second, scientific and technical, "Water Metabolism and Some Observations of the Inter-Relationship Between the Hormones".

The Fulton County Medical Society met at the Academy of Medicine, 38 Prescott Street, N.E., Atlanta, on November 15th. Dr. W. W. Anderson and Dr. Don F. Cathcart, reported cases, *Staphylococcus Pneumonia*, *Empyema*, *Septicemia*, *Osteomyelitis*; Dr. M. P. Pentecost and Linton Smith reported a case, *Unusual Early Absorption of Sutures*; Dr. Lon W. Grove made a clinical talk, *Thrombopenic Purpura*; Dr. Ben H. Clifton read a paper, *Review of Mortality Following Operation on the Thyroid Gland in Atlanta During the Past Five Years*. The discussions were lead by Dr. Floyd McRae, Dr. J. Gaston Gay and Dr. Mark S. Dougherty, Jr.

The Georgia Pediatric Society held its second annual meeting at the Academy of Medicine, Atlanta, December 13th. The scientific session at the afternoon meeting included the following papers: *Treatment of Meningitis*, Dr. Gilbert J. Levy, Memphis, Tenn.; *Erlthroblastic Anemia*, Dr. Robert A. Strong, New Orleans, La.; *Pediatric Therapeutics*, Dr. Wilburt C. Davison, Durham, N. C.; *Studies of Non-Specific Effects on the Tuberculin Reaction*, Dr. Albert G. Mitchell, Cincinnati, Ohio; COMMITTEE REPORTS, *Scientific Committee*, Dr. Joseph Yampolsky, Atlanta; *Committee on Arrangements*, Dr. S. C. Redd, Atlanta. The evening session included the following program: *Address of Welcome*, Dr. Marion C. Pruitt, Atlanta; *Response to Address of Welcome*, Dr. Joseph Yampolsky, Atlanta; *Aspiration Treatment of Empyema in Young Children*, Dr. Robert A. Strong, New Orleans, La., introduced by Dr. Wm. A. Mulherin, Augusta; *Encephalitis Following Acute Infections*, Dr. Gilbert J. Levy, Memphis, Tenn., introduced by Dr. W. L. Funkhouser, Atlanta; *Lung Abscesses*, Dr. Wilburt C. Davison, Durham, N. C., introduced by Dr. R. H. Oppenheimer, Emory

University; *Studies on the Thymus Gland*, Dr. Albert G. Mitchell, Cincinnati, Ohio, introduced by Dr. M. Hines Roberts, Atlanta; *Scurvy Without Clinical Manifestations*, Dr. Edwards A. Park, Baltimore, Md., introduced by Dr. W. W. Anderson, Atlanta.

The Southeastern Branch of the American Urological Association met at the Biltmore Hotel, Atlanta, December 7-8. Dr. Benjamin Barringer, New York City, read a paper entitled, *The Present Day Methods of Treating Cancer of the Prostate*; Dr. Edwin Beer, New York City, *Historic Review of Bladder Tumors*; Dr. William Braasch, Rochester, Minn., *The Keytogenic Diet in Treating Urinary Tract Infections*; Dr. Hugh Cabot, Rochester, Minn., *Treatment of Undescended Testicle*; Dr. John R. Caulk, St. Louis, Mo., *Bladder Neck Obstruction in Children*; Dr. Robert H. Herbst, Chicago, Ill., *Renal Hyperplasia*; Dr. Howard S. Jeck, New York City, *Nupercaine as a Spinal Anesthetic with Special Reference to the Employment of Solutions of High Dilution*; Dr. Geo. Livermore, Memphis, Tenn., *Pain in Cases of Dilated Pelvis and Ureter*; Dr. William Lower, Cleveland, Ohio, *Problems of Lesions of the Right Upper Quadrant*; Dr. Gilbert Thomas, Minneapolis, Minn., *Non-Specific Infections of the Prostate and Their Relations to General Diseases*.

Dr. J. H. Kite, announces the opening of offices at 322 Doctors Building, 478 Peachtree Street, N.E., Atlanta. Practice limited to orthopedic surgery.

Dr. Walker L. Curtis, son of the late Dr. C. M. Curtis of College Park, announces the opening of offices in College Park for the practice of medicine and surgery. He graduated from Emory University School of Medicine in 1928. Upon graduation he took a post-graduate course in New York City and since has been engaged in practice at Sparks, Georgia.

Dr. R. A. Bartholomew and Dr. Joseph Yampolsky, both of Atlanta, spoke at a public meeting held at Dalton on November 27th on *Child Hygiene*.

The Lowndes County Medical Society met at the Daniel Ashley Hotel, Valdosta, on November 14th.

The Clinical Conference of the Georgia Section of the Southeastern Surgical Congress was held at the Patterson Hospital, Cuthbert, on November 22nd. Dr. A. R. Rozar, Macon, made a case report, *Amputation for Senile Gangrene*, discussed by Dr. B. T. Wise, Americus; Dr. W. A. Selman, Atlanta; and Dr. Gordon Chason, Bainbridge. Dr. J. C. Patterson, Cuthbert, case report, *Peptic Ulcer*, discussed by Dr. H. C. Sauls, Atlanta; Dr. S. P. Wise, Americus, and Dr. Frank K. Boland, Atlanta. Dr. B. H. Minchew, Waycross, made a case report which was discussed by Dr. I. W. Irvin, Albany, and Dr. H. C. Crawford, Atlanta. Dr. A. H. Hilsman, Albany, case report, *Surgery of the Biliary System*, discussed by Dr. A. J. Mooney, Statesboro; Dr. Frank Bird, Valdosta; and

Dr. C. W. Roberts, Atlanta. Dr. E. B. Anderson, Americus, case report, discussed by Dr. Stephen T. Brown, Atlanta; Dr. Earl Floyd, Atlanta; and Dr. Charles H. Watt, Thomasville. Dr. E. A. Wilcox, Augusta, case report, *Acute Intestinal Obstruction*, discussed by Dr. B. H. Clifton, Atlanta; Dr. Kenneth S. Hunt, Griffin; and Dr. Julian K. Quattlebaum, Savannah. Dr. Cleveland Thompson, Millen, case report, *Chronic Empyema*, discussed by Dr. D. B. Ware, Fitzgerald; Dr. C. B. Greer, Brunswick; and Dr. Geo. W. Fuller, Atlanta. Dr. Gerry R. Holden, Jacksonville, Fla., case report, *Carcinoma of Cervix Uteri*. Dr. T. C. Davison, Atlanta, case report, *Goiter Problems*, discussed by Dr. Grady E. Clay, Atlanta; Dr. W. G. Elliott, Cuthbert; and Dr. W. A. Selman, Atlanta.

Dr. Russell L. Cecil, Professor of Internal Medicine, New York Polyclinic Medical School and Hospital, New York City, gave a lecture on Wednesday, December 5th, at 2:30 P. M., at the clinic on *Abscess of the Lung*. Discussion of various theories as to etiology. 1. The bronchogenic theory. 2. The embolic theory. 3. Bacteriology of lung abscess. 4. The role of the fusospirochetes. 5. Interpretation of x-ray findings. 6. Prognosis and treatment with special reference to some of the newer forms of therapy.

The meeting of the Clinical Society of the New York Polyclinic Medical School and Hospital was held on Monday evening, December 3rd, at 8:30 P. M. The program was as follows: 1. Treatment of metacarpal fractures. H. C. S. deBrun, M.D. 2. Treatment of intracapsular fractures of the femur. Wm. V. Healey, M.D. 3. Trends of the treatment of fractures. C. S. Scudder, M.D., Boston, Mass.—by invitation—Discussion to be opened by Robert Kennedy, M.D.,—by invitation.

The Georgia Medical Society, Savannah, met on November 27th. Dr. T. Z. Cason read a paper entitled *The Management of the Diabetic Patient in the Out-Patient Clinic*; discussion led by Dr. J. W. Daniel, Sr., and Dr. J. Reid Broderick. Dr. H. Marshall Taylor, *The Hygiene of Swimming—Motion Picture*; discussion led by Dr. G. H. Lang.

Dr. Olin H. Weaver, Macon, read a paper before a meeting of the Spalding County Medical Society held at the R. F. Strickland & Son Memorial Hospital, Griffin, on November 20th.

The Randolph County Medical Society, in cooperation with the Georgia Pediatric Society, gave a Child Welfare program at Cuthbert on December 6th. A meeting for the public was held at the county court house at 3:00 P. M. A scientific program for the medical profession was held at the Woman's Club room at 7:00 P. M.

Dr. Benjamin Bashinski and Dr. O. R. Thompson, both of Macon, were speakers on the program for

Child Welfare Day at the county courthouse at Hawkinsville, November 20th.

The Baldwin County Medical Society, in cooperation with the Georgia Pediatric Society, sponsored a meeting at Milledgeville on November 27th for Child Welfare. Dr. Joseph C. Akerman and Dr. H. P. Harrell, University of Georgia Medical Department, Augusta, were speakers.

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, December 6th. Reports were made on sectional meetings of the recent session of the Southern Medical Association at San Antonio, Texas, by the following: Dr. Frank K. Bolland, *General Impression of the Meeting*; Dr. Murdock S. Equen, *Eye, Ear, Nose and Throat*; Dr. M. Hines Roberts, *Pediatrics*; Dr. Jas. E. Paullin, *Medicine*; Dr. R. R. Kracke, *Pathology*; Dr. John W. Turner, *Gynecology and Obstetrics*; Dr. Edgar G. Ballenger, *Urology*; Dr. W. W. Young, *Psychiatry*; Dr. J. K. Fancher, *Endocrinology*; Dr. Edgar F. Fincher, Jr., *Neuro-Surgery*. Dr. C. W. Roberts read a paper entitled, *Concurrent Osteogenic Sarcoma in Brother and Sisters*. Discussion led by Dr. J. L. Campbell, Dr. Wm. F. Lake and Dr. Thos. P. Goodwin. Officers for 1935 were nominated.

#### OBITUARY

Dr. Phillips Hovis Comas, Baxley; University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore, Md., 1882; aged 73; died suddenly at his home on October 19, 1934. He was born and reared in Baxley, served in the United States Navy for a number of years. At the time of his death he was surgeon for the Southern Railway, Chairman of the Appling County Democratic Executive Committee, member of the General Assembly of Georgia; member of the Masonic Lodge and the Baxley Methodist Church. Dr. Comas has practiced medicine for half a century and was widely known for his ability as a physician. Surviving him are his widow, several nieces and nephews and one aunt. Funeral services were conducted from the Methodist church by Rev. H. C. Jones and Rev. W. B. Feagins. Burial was in the city cemetery.

Dr. William T. Hamilton, Athens; Georgia College of Eclectic Medicine and Surgery, Atlanta, 1905; aged 67; died at his home on October 20, 1934. He was born and reared in Jackson county. Dr. Hamilton practiced medicine in Athens for 29 years. Many friends held him in high esteem. Surviving him are his widow, three sons, Fred, Guy, Wm. T. Hamilton, all of Athens. Funeral services were conducted by Rev. L. B. Jones from the Young Harris Methodist Church. Burial was in the cemetery at Prospect Methodist Church.

Dr. Lemuel Eugene Thornton, Riceboro; Atlanta College of Physicians and Surgeons, Atlanta, 1901; aged 58; died in a Savannah hospital after a short



illness on October 1, 1934. He moved to Riceboro from Fairburn a number of years ago. Dr. Thornton had been engaged in the practice of medicine and made many friends. Surviving him are his widow, one daughter, Mrs. Jack Trulock, Climax; two sons, C. L. Thornton, Jacksonville, Fla., and Ralph E. Thornton, Brooklyn, N. Y. Burial was in the city cemetery at Fairburn.

*Dr. William Harry Sutton*, Midville; member; University of Georgia Medical Department, Augusta, 1908; aged 51; died suddenly at his home on October 31, 1934. He was born and reared in Emanuel County. Dr. Sutton had practiced medicine in Burke County for more than twenty years and was favorably known throughout that section as a successful physician. He was a member of the Burke County Medical Society and the Masonic Lodge. Surviving him are his mother, one sister, Mrs. Geo. F. Sanders; two brothers, John and Sanford Sutton, all of Swainsboro. Rev. J. M. Foster conducted the funeral services from the home of his sister, Mrs. Sanders, at Swainsboro. Burial was in the city cemetery.

*Dr. Linus M. Ellis*, Washington; member; Atlanta College of Physicians and Surgeons, Atlanta, 1899; aged 56; died suddenly at the home of Mr. J. Luke Burdette on November 1, 1934, where he had gone to make a professional visit. He was born at Calvin in Jasper County. Dr. Ellis moved to Washington in 1916 and practiced there until his death. He studied continuously and kept abreast of the advancement of his profession. Dr. Ellis was held in high esteem by hundreds of friends and acquaintances. Surviving him are his widow and one son, L. M. Ellis, Jr., Gainesville, Fla. Rev. J. O. Brand conducted the funeral services from the home. Burial was in the city cemetery of Monticello.

*Dr. Oscar Frederick Collum*, McRae; member; Atlanta School of Medicine, Atlanta, 1907; aged 52; died of heart disease at his home on November 14, 1934. He was born in Batesburg, S. C., moved to Camps, Georgia, when eight years of age. After he graduated in medicine, he began practice at Chauncey where he continued until about two years ago then moved to McRae. Dr. Collum was a successful practicing physician and held in high esteem by many friends and acquaintances. He was a member of the Telfair County Medical Society, Masonic Lodge, Shrine and the Baptist Church. Surviving him are his widow, one sister and three brothers. Funeral services were conducted by Rev. P. Q. Cason and Rev. Strickland from the Chauncey Baptist Church. Burial was in Chauncey cemetery.

*Dr. Francis Marion Hubbard*, Commerce; member; Emory University School of Medicine, Emory University, 1888; aged 78; died at his home on November 9, 1934. He was born in Hart County. Dr. Hubbard began the study of medicine under our former Governor, Dr. L. G. Hardman, and later gradu-

ated from the Atlanta School of Medicine. He practiced in Jackson and adjoining counties for more than forty years. Dr. Hubbard had an extensive practice, well known as a successful practitioner and one of the most charitable men in his home county. He was a member of the Jackson-Barrow Counties Medical Society, Ninth District Medical Society, Masonic Lodge and the Baptist Church. Surviving him are his widow and one son, G. L. Hubbard. Dr. C. C. Tooke conducted the funeral services from the First Baptist Church. Members of the Jackson-Barrow Counties Medical Society formed an honorary escort.

#### WOMAN'S AUXILIARY

(Continued from Page 462)

attending the Summer Extension Classes for physicians. Letters to this effect were sent to every member and over two hundred availed themselves of the privilege.

The President of the State Auxiliary is on the Executive Board of the Child Health and Welfare Council of Georgia and at the request of the chairman, she has appointed a member in each county to serve on the local councils; a past president is a member of the Cancer Commission of the Medical Association of Georgia. Five hundred copies of "Our Objectives" for the year have been mailed to all members, to all officers of the Medical Association of Georgia, to the officers of the A. M. A. Auxiliary and to the Southern Auxiliary.

Each District has its scrap-book and history, uniform in color and patterned after the State Scrap-book.

At the May Convention, a resolution was passed, setting aside March 30th as Doctors' Day. The resolution was sent to the A. M. A. Auxiliary, hoping to inspire other states to pay this same tribute to their physicians.

Mimeographed letters have been mailed by every officer and chairman to the county and district presidents and to the members of their committees, outlining their work and making suggestions for local work.

The Georgia Auxiliary feels a pride in the fact that during ten and a half years of existence, it has furnished to the National Auxiliary, one President, a 3rd Vice-President, a Corresponding Secretary, a Director, a Historian, a Parliamentarian; to the Southern Auxiliary, two Presidents, a First Vice-President, three Recording Secretaries, one Corresponding Secretary, and several chairmen.

We feel that through our various connections, we are taking a forward step in making Georgia Health Conscious under the direction of the Medical Association of Georgia. We are glad to report that many states have requested our plans and our material.

# OFFICERS AND COMMITTEES MEDICAL ASSOCIATION OF GEORGIA

1934-1935

EIGHTY-SIXTH ANNUAL SESSION, ATLANTA  
MAY 7, 8, 9, 10, 1935

## Officers

President.....	Clarence L. Ayers, Toccoa
President-Elect.....	Jas. E. Paullin, Atlanta
First Vice-President.....	Geo. A. Traylor, Augusta
Second Vice-President.....	Walter G. Elliott, Cuthbert
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## Delegates to the A. M. A.

William H. Myers (1935-6).....	Savannah
Alternate, Wm. A. Mulherin.....	Augusta
Chas. W. Roberts (1935-6).....	Atlanta
Alternate, Marion C. Pruitt.....	Atlanta
Olin H. Weaver (1934-5).....	Macon
Alternate, C. K. Sharp.....	Arlington

## Council

J. A. Redfearn, Chairman.....	Albany
Grady N. Coker, Clerk.....	Canton

## Councilors

1. C. Thompson (1936).....	Millen
2. J. A. Redfearn (1936).....	Albany
3. J. C. Patterson (1936).....	Cuthbert
J. Cox Wall (1935) Old 12th.....	Eastman
4. Kenneth S. Hunt (1936).....	Griffin
5. W. A. Selman (1937).....	Atlanta
6. H. G. Weaver (1937).....	Macon
7. M. M. McCord (1935).....	Rome
8. J. E. Penland (1937).....	Waycross
9. Grady N. Coker (1935).....	Canton
10. S. J. Lewis (1935).....	Augusta

## Vice-Councilors

1. Jas. C. Metts (1936).....	Savannah
2. Chas. H. Watt (1936).....	Thomasville
3. J. Cox Wall (1936).....	Eastman
4. Enoch Callaway (1936).....	LaGrange
5. Marion C. Pruitt (1937).....	Atlanta
6. H. D. Allen (1937).....	Milledgeville
7. H. L. Erwin (1935).....	Dalton
8. H. M. Tolleson (1937).....	Eastman
9. J. K. Burns (1935).....	Gainesville
10. H. M. Fullilove (1935).....	Athens

## COMMITTEES

### Scientific Work

Joseph Yampolsky, Chairman (1935).....	Atlanta
S. T. R. Revell (1936).....	Louisville
Geo. A. Traylor (1937).....	Augusta
Allen H. Bunce, Secretary-Treasurer.....	Atlanta

### Public Policy and Legislation

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A. R. Rozar (1936).....	Macon
Allen H. Bunce, Secretary-Treasurer.....	Atlanta
T. F. Abercrombie, Director, Department of Public Health, State of Georgia.....	Atlanta

### Medical Defense

Frank K. Boland, Chairman (1938).....	Atlanta
J. O. Elrod (1936).....	Forsyth
Wm. A. Mulherin (1939).....	Augusta

J. A. Redfearn, Chairman of Council.....	Albany
Allen H. Bunce, Secretary-Treasurer.....	Atlanta

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Geo. F. Klugh (1935).....	Atlanta
Arthur D. Little (1936).....	Thomasville
D. Henry Poer (1938).....	Atlanta
C. D. Whelchel (1939).....	Gainesville

## Abner Wellborn Calhoun Lectureship

Jas. E. Paullin, Chairman (1938).....	Atlanta
H. I. Reynolds (1939).....	Athens
Eugene E. Murphey (1935).....	Augusta
Craig Barrow (1936).....	Savannah
Frank K. Boland (1937).....	Atlanta

## Economics

Wm. A. Mulherin, Chairman (1935).....	Augusta
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C. L. Ridley (1936).....	Macon
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# Directory of the Medical Association of Georgia for 1934

Names of all members and officers are published as corrected by Secretaries of county societies.

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Fort McPherson (Asso.)  
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Atlanta  
Wood, R. Hugh, 478 Peachtree St., N.E.,  
Atlanta  
Wright, E. S., Medical Arts Bldg.,  
Atlanta  
Yampolsky, Joseph, 478 Peachtree St.,  
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Atlanta  
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Atlanta

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Delegate.....Pierce, L. W.

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Avera, J. B., Brunswick  
Branham, H. M., Brunswick  
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Egbert, E. H., St. Simons Island  
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Rogers, J. V., Cairo  
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Delegate.....Lamb, R. B.  
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Rogers, R. L., Gainesville  
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Ward, Eugene L., New Holland,  
Gainesville.  
Wellborn, C. J., Gainesville  
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President.....Darden, Horace  
Sec'y.-Treas.....Earl, H. L.  
Delegate.....Hutchings, E. H.

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Earl, H. L., Sparta  
Hutchings, Earnest H., Sparta  
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Delegate.....Smith, J. G.  
Alternate Delegate.....Crawford, R. L.

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Bowdoin, W. H., Statham  
Hardman, L. G., Commerce  
Harris, E. R., Winder  
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Mathews, W. L., Winder  
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Belcher, F. S., Monticello  
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Vice-President.....Ketchin, S. C.  
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Delegate.....Revell, S. T. R.

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Ketchin, S. C., Louisville  
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Oliphant, Jones B., Mitchell  
Peacock, J. D., Wadley  
Pilcher, John J., Wrens  
Revell, S. T. R., Louisville

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Vice-President.....Mulkey, Q. A.  
Sec'y.-Treas.....Thompson, C.  
Delegate.....Lee, H. G.  
Alternate Delegate.....Mulkey, Q. A.

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Clifton, Ben L., Millen, R. F. D. (Asso.)  
Jones, J. M., Thrift (Asso.)  
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Lunsford, Guy G., State Capitol, Atlanta  
Mulkey, A. P., Millen (Asso.)  
Mulkey, Q. A., Millen  
Perkins, M. E., Millen (deceased)  
Perkins, M. E., Millen  
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**JONES COUNTY****Officer**

Sec'y.-Treas.....Zachary, J. D.

**Members**

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Sec'y.-Treas.....Rogers, J. M.

**Members**

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Jackson, J. H., Barnesville  
Pritchett, D. W., Barnesville  
Rogers, J. M., Barnesville  
Traylor, S. B., Barnesville  
Willis, C. H., Barnesville

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Vice-President.....Bush, Jas. L.  
Sec'y. Treas.....Hicks, Chas. L.  
Delegate.....Cheek, O. H.

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Bedingfield, W. E., Rentz  
Benson, R. S., Alamo, R. 1  
Bush, Jas. L., Dublin  
Cheek, O. H., Dublin  
Claxton, E. B., Dublin  
Coleman, A. T., Dublin  
Hicks, Chas. L., Dublin  
New, J. E., Dexter  
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**LOWNDES COUNTY****Officers**

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Vice-President.....Ellis, S. B.  
Sec'y.-Treas.....Williams, T. C.  
Delegate.....Tolleson, H. M.  
Alternate Delegate.....Crozier, Gordon T.

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Clements, H. W., Adel  
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Ellis, S. B., Valdosta  
Griffin, A., Valdosta  
Johnson, A. M., Valdosta  
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Prescott, J. P., Lake Park  
Quarterman, P. C., Valdosta  
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Delegate.....Derrick, H. C.  
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 Griffith, R. P., 1260 Peacock Ave., Columbus  
 Jenkins, W. F., City Hospital, Columbus  
 Johnson, C. D., Murrah Bldg., Columbus  
 Johnson, J. H., Murrah Bldg., Columbus  
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Williams, Allie W., Masonic Temple, Columbus  
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**NEWTON COUNTY****Officer**

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 Alternate Delegate \_\_\_\_\_ Coleman, W. A.

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 Gary, Loren, Jr., Shellman  
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 Delegate \_\_\_\_\_ Traylor, Geo. A.  
 Alt. Delegate \_\_\_\_\_ Battey, W. W.  
 Alt. Delegate \_\_\_\_\_ Cranston, W. J.

**Members**

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 Akerman, Joseph, 831 Fifteenth St., Augusta  
 Battey, Colden R., 638 Greene St., Augusta  
 Battey, W. W., Jr., 428 Sixth St., Augusta  
 Bedingfield, W. R., Southern Finance Bldg., Augusta  
 Bernard, G. T., 203 Thirteenth St., Augusta  
 Blanchard, C. A., Montgomery Bldg., Augusta  
 Blanchard, P. G., Appling  
 Brittingham, Jno. W., 1345 Green St., Augusta  
 Blanchard, C. A., Montgomery Bldg., Augusta  
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 Bryans, C. I., Southern Finance Bldg., Augusta  
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 Butler, J. H., Southern Finance Bldg., Augusta  
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 Gibson, C., Thomson  
 Goodrich, W. H., Southern Finance Bldg., Augusta  
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 Harrell, H. P., Southern Finance Bldg., Augusta



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 Mountain, G. W., 2612 Walton Way, Augusta  
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 Mulherin, Wm. A., Shirley Apartments, Augusta  
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 Phinzy, Thos. 501 Greene St., Augusta  
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 Timmons, C. C., Marion Bldg., Augusta

Todd, L. N., Board of Tuberculosis Hospital, Valley Station, Ky.  
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 Copeland, H. J., Griffin  
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 Primrose, A. C., Americus  
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 Delegate.....Watt, C. H.  
 Alternate Delegate.....Wahl, E. F.

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 Bell, Rudolph, Thomasville  
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 Wall, H. A., Ochlochnee  
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 Odom, W. W., Lyons  
 Peacock, W. F., Vidalia  
 Youmans, H. D., Lyons

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(Calhoun, Early, Miller)

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 Delegate.....Standifer, J. G.  
 Alternate Delegate.....Sharp, C. K.

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 Beard, J. S., Edison  
 Bridges, R. R., Leary  
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 Roberts, C. A., Leary  
 Sharp, C. K., Arlington  
 Shepard, W. O., Bluffton  
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 Standifer, W. B., Blakely (Hon.)  
 Twitty, C. W., Elmodel  
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 Delegate.....Herman, E. C.  
 Alternate Delegate.....O'Neal, R. S.

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 Clark, W. H., LaGrange  
 Hadaway, W. H., LaGrange  
 Herman, E. C., LaGrange  
 McCall, W. R., LaGrange  
 McCulloh, Hugh, Jr., West Point  
 McCulloh, Hugh, West Point  
 Morgan, D. E., LaGrange  
 O'Neal, Rance, West Point  
 O'Neal, R. S., LaGrange  
 Park, E. R., LaGrange  
 Phillips, W. P., LaGrange  
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 Smith, M. E., Grantville  
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 Delegate.....Belflower, H. M.  
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 Belflower, H. M., Sycamore  
 Rawlins, R. D., Rebecca  
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 Stephens, L. D., Sycamore  
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 Barron, H. A., Thomaston (Hon.)  
 Blackburn, J. D., Thomaston  
 Bridges, B. L., Thomaston  
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 Gardner, J. L., Sulphur Springs  
 Hale, B. C., Rossville  
 Hammond, D. W., LaFayette  
 Hammond, J. H., LaFayette (Hon.)  
 Hice, E. H., Rock Springs (deceased)  
 Murphy, M. W., Ringgold  
 Murray, O. B., Rossville  
 Simonton, Fred H., Chickamauga  
 Spearman, M. W., Lake City, Fla.  
 Stephenson, Chas. W., Ringgold.  
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 Delegate.....Pirkle, J. A.  
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 Pirkle, J. A., Monroe  
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 Upshaw, H. L., Social Circle

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Delegate.....Reavis, W. F.  
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 DeLoach, A. W., Waycross  
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 Hafford, W. C., Waycross  
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 Hendry, G. T., Blackshear  
 Holt, J. T., Baxley  
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 McMahan, J. W., Alma  
 Minchew, B. H., Waycross  
 Mixson, W. D., Waycross  
 Oden, T. E., Blackshear  
 Overstreet, E. J., Baxley  
 Penland, J. E., Waycross  
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 Reavis, W. F., Waycross  
 Scruggs, W. H., Waycross  
 Seaman, H. A., Waycross  
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 Walker, R. C., Waycross  
 Williams, W. P., Blackshear  
 Witmer, C. A., Waycross

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**Member**

Davis, A. W., Warrenton

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 Alternate Delegate.....Taylor, Ralph L.

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 Lennard, O. D., Tennille  
 Malone, Steve B., Sandersville  
 Mitchell, L. C., Sandersville  
 Newsom, N. J., Sandersville  
 Overby, N., Sandersville  
 Rawlings, F. B., Sandersville  
 Rogers, O. L., Sandersville  
 Taylor, Ralph L., Davisboro

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 Vice-President.....Colvin, J. T.  
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 Moody, E. A., Odum  
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 Tyre, J. L., Screven

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 Delegate.....Rollins, J. C.  
 Alternate Delegate.....Wood, D. L.

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 Bradley, R. S., Dalton (Hon.)  
 Brewer, A. M., Tunnel Hill

Broadrick, G. L., Dalton  
 Covington, J. F., Cartersville  
 Easley, Frank, Dalton  
 Erwin, H. L., Dalton  
 Kennedy, B. L., Dalton  
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 McAfee, J. G., Dalton  
 Rollins, J. C., Dalton  
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 Shellhorse, E. O., Dalton  
 Starr, Trammell, Dalton  
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**WILKES COUNTY**

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 Simpson, A. W., Washington  
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 Sumner, G. S., Poulán  
 Tipton, W. C., Sylvester  
 Tracy, J. L., Sylvester

**OFFICERS AND COMMITTEES**

(Continued from Page 468)

**L. G. Hardman Silver Loving Cup**

W. A. Selman, Chairman.....Atlanta  
 Wm. A. Mulherin.....Augusta  
 Chas. H. Watt.....Thomasville  
 Wm. H. Myers.....Savannah

**Crawford W. Long Bronze Statue To Cooperate With Chamber of Commerce, Jefferson, Georgia**

Garnett Quillian, Chairman.....Atlanta  
 E. M. McDonald.....Jefferson  
 S. T. R. Révell.....Louisville  
 Wm. H. Myers.....Savannah  
 Chas. W. Crane.....Augusta

**Study of Maternal Mortality and Infant Deaths**

E. D. Colvin, Chairman.....Atlanta

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 A. J. Waring.....Savannah

**Second District**

I. M. Lucas.....Albany  
 S. L. Cheshire.....Thomasville

**Third District**

Carl P. Savage.....Montezuma  
 J. C. Patterson.....Cuthbert

**Fourth District**

Thos. S. Bailey.....Newnan  
 S. C. Rutland.....LaGrange

**Fifth District**

J. R. McCord.....Atlanta  
 E. D. Colvin.....Atlanta

**Sixth District**

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 J. D. Applewhite.....Macon

**Seventh District**

P. O. Chaudron.....Cedartown  
 J. E. Lester.....Marietta

**Eighth District**

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 G. T. Crozier.....Valdosta

**Ninth District**

M. B. Allen.....Hoschton  
 D. H. Garrison.....Tate

**Tenth District**

S. S. Smith.....Athens  
 Wm. A. Mulherin.....Augusta

**Ex-Officio**

T. F. Abercrombie, Director, Department of  
 Public Health for Georgia.....Atlanta

**Fraternal Delegates to Other State Meetings**

To Visit Alabama—H. J. Goodwyn, Carrollton; and  
 J. T. McCall, Rome.  
 To Visit Florida—Arthur G. Fort, Atlanta; and Wm.  
 S. Goldsmith, Atlanta.  
 To Visit North Carolina—John K. Burns, Gainesville;  
 and Bradley B. Davis, Gainesville.  
 To Visit South Carolina—Wm. R. Dancy, Savannah;  
 and Wm. A. Mulherin, Augusta.

### RACIAL, GEOGRAPHIC, ANNUAL, AND SEASONAL VARIATIONS IN BIRTH WEIGHTS

In a comparison of birth weights of 3,255 normal Negro infants, 1,801 ward white infants, and 955 private patients it was found that there was only two ounces difference in the birth weights of the two white groups while there was a difference of fourteen ounces between the ward white group and the negro group.

There was a geographic variation in birth weights with a tendency for the weight to increase in the southern portion of the United States although there was a lower weight in seaside cities such as St. Petersburg and Los Angeles. Atlanta had the highest average studied. (Seven pounds, ten ounces).

In studying the seasonal variations for different parts of the country and for the combined group it was found that there is a distinct rise during spring and summer with a lowering for fall and winter which corresponds to the curve of available sunshine.

An effort was made to determine whether the depression would affect the birthweights and it was found that there was a steady decline in the negro race during the years 1930, 1931, and 1932 from an average of six pounds fifteen ounces to six pounds eleven ounces.

While there are many factors, such as heredity and nutrition, which undoubtedly influence birth weights, this study would seem to emphasize the importance of sunshine to the pregnant mother. The result of the pigmented skin of the negro filtering out the otherwise available ultraviolet light is very strikingly brought out by the marked difference in birth weights of the races while there is little difference in the sizes of the mature adults.

Abstract of an article in the *Amer. J. of Obst. and Gyn.*: 27:5 pp. 725-728 (May), 1934.  
Lee Bivings, M.D., Atlanta.

### UNJUST TO THE DOCTOR

One of the peculiar effects of the depression of the past several years is the complaint of physicians, the country over, at the failure of many patients to make payment for services rendered with the same degree of care that is ordinarily given to the settlement of average accounts.

It seems to be taken for granted, in many cases, that the physician must take his place at the bottom of the list and await his turn for payment, with the result that in many instances no payment is made at all.

The question is one that is attracting widespread attention of physicians, and it seems to be one about which there can be but one side, for certainly no reasonable man can argue that a physician is not entitled to the same consideration in the matter of compensation for services as is accorded other lines of business.

The average businessman has little patience with one who owes him a sum of money over a period of a year, and at the end of that time had paid neither interest nor principal. Ordinarily, where doubt exists, such a condition is prevented by requiring collateral in the beginning, and by collecting interest in advance.

Then if payment is not made, the collateral takes care of the loan.

Time and skill represent the doctor's business capital, available at fixed rates. If he does not collect on his investment, he must either fail to meet his own obligations or borrow money and pay interest monthly to keep his credit standing or to retain his insurance or property, as the case may be.

Yet he requires no collateral for his services. The doctor does not refuse his capital to anybody, and in consequence it is drawn upon much more freely than monetary capital. If his patients cannot pay his work becomes charity. He does not even limit the use of it. In case of a sudden attack, the doctor doesn't tell you that you must get sick only between 9 a. m. and 2 p. m., except Sundays and holidays. Or that you already owe him \$50 and it would be unbusinesslike to give you any more time until you had liquidated the debt. Or that he could not risk missing a call from X, Y or Z, who pay their bills promptly.

The doctor's foremost consideration is the welfare of his patients. He frequently carries the responsibility of life and death. But in too many instances he has the additional heavy tax of worry over his financial obligations. He cannot let a patient lose his life because he will not pay his bill; it would not be humane. But if his insurance or his home is at stake—well, that's just a business proposition.

A large amount of charity work is the inevitable lot of all doctors. They are too frequently imposed upon by those who can pay, but will not.

—*The Constitution*, Atlanta, Ga., December 2, 1934

### CHICAGO MEDICAL SOCIETY RESOLUTIONS

#### Radio Broadcasts

WHEREAS, a series of broadcasts under the title of *Doctors, Dollars and Disease* is presented to the public every week by the Public Health Committee of the National Advisory Council on Radio Education, 60 East 42nd Street, New York, and

WHEREAS, these broadcasts either with or without the critical knowledge of the members of the Council, are conducted by certain doctors and laymen who are in sympathy with and are now urging socialization in medicine, compulsory health insurance and state medicine.

THEREFORE, BE IT RESOLVED, that the Chicago Medical Society indignantly protests against this insidious propaganda which is definitely hostile to the ideals, evolution and successful development of modern medicine, and

FURTHER, BE IT RESOLVED, that copies of this protest be sent to the members of the Advisory Council on Radio Education and to the Secretaries of the various organized medical societies that they may register appropriately their disapproval.



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# PIEDMONT HOSPITAL NEW OBSTETRICAL DEPARTMENT

The Piedmont Hospital has recently opened a new obstetrical department which is modern in every detail. This department occupies the entire top floor of the main hospital building, which is a fireproof ferro-concrete structure and is separate and isolated from all the other departments of the hospital.

There are two delivery rooms with a sterilizing and pack room between them. The delivery rooms are large and well ventilated and have adequate lighting facilities. The main nursery is also large and well ventilated and there is a connecting bath room for the babies. The baby bath is porcelain and is of the most modern design and equipped with a Leonard thermo-static mixing valve which will furnish water at a uniform temperature at all times. There is, in addition, an isolation nursery which can be used for premature or sick infants. The nursery radiators are fitted with thermostatic controlled valves so that an even temperature of the air in the rooms can be maintained in cold weather.

Relatives and friends can see the babies in the nurseries through plate glass partitions from the lobby without entering the nurseries. For the convenience of visitors a comfortable reception room has been provided. This reception room and the nurseries are located near the elevator and adjacent to the nurses chart room.

There are fifteen outside, comfortable, well equipped rooms. Five of these rooms have private baths. All rooms have telephone and radio connections. The telephone service, which is for out-going calls only, is available now and the radio will be ready later when other floors of the building are similarly equipped.

## DR. T. F. ABERCROMBIE ELECTED PRESI- DENT, C. OF STATE AND P. H. A. OF N. AMERICA

The highest honor available in the field of Public Health has been accorded to Dr. T. F. Abercrombie, Director of the Georgia Department of Public Health.

Dr. Abercrombie was elected in June of this year to the presidency of the Conference of State and Pro-

vincial Health Authorities of North America. This includes all governmental health agencies of the continent north of the Panama Canal. Those who know Dr. Abercrombie and who are familiar with the efficient health department he has developed in Georgia under the handicap of pitifully inadequate appropriations are not at all surprised that he has received this recognition.

T. F. S.

## DR. THOS. J. COLLIER ELECTED PRESIDENT A. A. OF U. S. AND CANADA

Dr. Thomas J. Collier, of Atlanta, was honored in being elected President of the Associated Anesthetists of the United States and Canada at the meeting recently held in Boston, Mass.

This organization is the largest of its kind. Its membership is composed of the leading professional anesthetists of almost every civilized country in the world. Their meetings have previously been held at the time and place of the meetings of the American College of Surgeons. The 1935 meeting will be held in Atlantic City, N. J., with the joint session of the American Medical Association and the Canadian Medical Association.

Dr. Collier has always been keenly interested in the field of anesthesia. He has been an active member and a regular attendant to all of the important meetings of the Anesthetists' Associations and is past president of the Southern Anesthetists Association. He has kept abreast with the advances, modern agents, methods and apparatus for anesthesia in order to be able to render the best service to the patient and for the profession. He has practiced his specialty for more than thirty years. He is the Chief Anesthetist to the Piedmont Hospital, and was formerly Chief Anesthetist to Wesley Memorial Hospital, having served in that capacity for several years after its organization.

I wish to take this privilege to extend to Dr. Collier my congratulations upon his well deserved honor. It is particularly gratifying to have in this section a man who has merited an office of international scope.

C. E. L.

## ATLANTA PHYSICIAN SAVES YOUTH BY PERFORMING HEROIC OPERATION

Atlanta medical leaders Thursday were discussing one of the most amazing operations ever performed here and warmly praising the work of Dr. L. Minor Blackford, well-known physician who twice saved the life of a young man at the FERA transient bureau, once at the extreme risk of his own.

Dr. Blackford would not discuss the operation but his friends told this remarkable story, some of them declaring they would nominate him for the Carnegie medal of honor.

The physician was called to the bureau several nights ago to attend Herbert Conner, 28, ill with abscessed tonsils. He went without equipment and found Con-

ner near death from lack of breath, the swollen tonsils closing the air from his lungs.

Working alone in a dimly lighted attic, Dr. Blackford used only his pocket knife to slit a hole in the youth's throat in order that air might enter the lungs. He then held the incision open with his hands and had an untrained man administer heart and respiration stimulants. Soon the air began to enter the lungs but as Conner was bleeding freely from the incision the blood also was entering the lungs as well as the air.

Then Dr. Blackford had his helper get an ordinary rubber tube which he sent down Conner's windpipe to the lungs and through this tube the doctor himself sucked the blood from the patient's lungs.

After a long time the youth began to breathe comfortably and the surgeon dressed his wound and put him to sleep.

The patient was reported to be doing well Thursday, as Dr. Blackford was receiving the plaudits of his profession, and he smoked a cigaret, blowing the smoke through the tube in his throat.

"I might have sucked the blood from the lung of someone near to me but it is only one man in a million who would have done what Dr. Blackford did and risk the chance of dangerous infection and possible death to himself," a prominent physician and surgeon said in discussing the exploit.—The Constitution, Atlanta, Ga., Oct. 12, 1934.

### COCOMALT

The great strides taken by the medical profession in the last few years in the prevention of rickets can be traced directly to the newer knowledge and understanding of Vitamin D. Because of the discovery of Vitamin D, rickets—once a familiar childhood menace—is now rapidly becoming a rare disease in civilized countries.

Recent experiments prove beyond a shadow of a doubt that the amount of Vitamin D in the dietary of the pregnant woman determines to a large extent the quality of the teeth, the skeleton, and the perfection of form of the coming child. Thus, by the systematic "feeding" of Vitamin D and calcium to the expectant mother it is possible to safeguard the child . . . and the mother, too . . . from malformation of the bone structure.

Cocomalt, mixed with milk, is useful in the dietary of expectant mothers—not only because it has almost twice the food-energy value of milk alone, not only because it provides extra proteins, carbohydrates and minerals (calcium and phosphorus)—but because it is rich in Vitamin D. Cocomalt is licensed by the Wisconsin University Alumni Research Foundation under Steenbock Patent No. 1,680,818. One glass or cup of Cocomalt, prepared as directed, contains not less than 30 Steenbock (81 U.S.P. revised) units of Vitamin D. Cocomalt is accepted by the American Medical Association, Committee on Foods.

### SHOULD COD LIVER OIL BE FLAVORED?

It is a well-known fact that young infants shy at aromatics. Other patients often tire of flavored medications to the point where the flavoring itself becomes repellant. This is particularly true if the flavoring is of a volatile nature or "repeats" hours after being ingested. Physicians have frequently used the terms "fresh," "natural," "sweet," and nutlike" in commenting upon the fine flavor of Meade's Cod Liver Oil. They find that most patients prefer an unflavored oil when it is as pure as Mead's.

Physicians who look with disfavor upon self-medication by laymen are interested to know that Mead's is one Cod Liver Oil that is not advertised to the public and that carries no dosage directions on carton, bottle or circular. Mead Johnson & Company, Evansville, Indiana, U. S. A., Pioneers in Vitamin Research, will be glad to send samples and literature to physicians only.

### TWO'S COMPANY—THREE'S A CROWD

"Sickness is a matter intimately personal. It is a time when sincerity of dealing cannot be compromised nor human feelings flouted.

"How disturbing, then, is the thought of having a third person or alien party exercise an influence on the relationship between the patient and his physician, the two persons who, above all others, are most vitally concerned when sickness enters the home.

"Yet this third party influence, with all its unpleasant and disturbing sequels, will inevitably be thrust upon patient and physician should some of the current new schemes of medical practice ever gain acceptance.

"Carried to their full development, such plans would mean that your family doctor would be the hiring of a commercial organization or of a department of the state, the former built up necessarily by business promotional efforts, high pressure salesmanship and price competition, the latter made compulsory by legal enactment.

"Experience has already shown that contract or insurance schemes would not be successful if they observed carefully the principles of conduct and fair competition which operate as definitely for the public good as for professional honor. In these principles financial gain is subordinated to the prime object of service to the patient and to humanity.

"Furthermore, the history of some of these ventures reveals highly deplorable tendencies. 'Scare head' advertising has appeared as a means of frightening people into subscribing for memberships. Medical service has been promised at ridiculously low and actually impossible rates. The services of hundreds of physicians have been promised to subscribing members, whereas actually but a small fraction of that number were 'signed up' and available. Patients have found that they must be served by the physician assigned to them, not by the man of their choice. And the poorer classes have paid the same price for medical service as the very wealthy.

"No, the fine, sympathetic, humanitarian service at present rendered by the family physician can never



be satisfactorily replaced by a commercial organization that retails medical service for a profit, nor by the state with a mechanized or regimented medical profession. The interjection of such agencies between patient and physician is unnecessary and cannot fail to be disturbing to all parties concerned."—from Mead Johnson & Company's Announcement in Hygeia, September 1934.

## CHECK SWINDLER

To The Editor:

There is a man who gives his name as L. F. Black, claiming to work for Chapman's Wholesale Grocery Company in Forsyth, who came to me for an examination about a week ago. He gives checks

made out to cash by the Grocery Company and apparently endorsed by Mr. Chapman. He endorses them himself as L. F. Black. I was notified this morning by the vice-president of the Forsyth bank that it was a forgery and that he has worked it on other doctors. Fortunately he did not get me except for \$10.00 worth of work and \$2.80 worth of change. I thought it might be worthwhile publishing the notice in the State Journal in the hope that some one would be able to trap him. He is 5 feet, 9 inches in height and weighs between 140 and 145 pounds. I do not remember his appearance well enough to give a description.

Macon, Georgia

MEMBER.

November 22, 1934.

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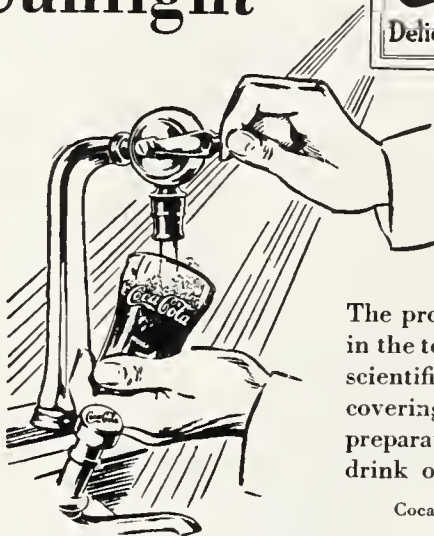
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